DOCUMENT RESUME

ED 116 558

HE 006 938

TITLE

Results of the 1974 NACUBO Comparative Performance

Study and Investment Questionnaire.

INSTITUTION

National Association of Coll. and Univ. Business

Officers, Washington, D.C.

PUB DATE

[75]

NOTE

72p.

EDRS PRICE

MF-\$0.76 HC-\$3.32 Plus Postage

DESCRIPTORS

*Comparative Analysis; *Educational Economics; *Educational Finance; *Financial Support; *Higher

*Educational Finance; *Financial Support; *Higher Education: Investment; Performance; Questionnaires;

Trusts (Financial)

IDENTIFIERS

*Endowment Funds

ABSTRACT

الاد

endowment pools representing 136 institutions. The market value of the pools which provided information as of June 30, 1974, was 6.9 billion dollars. The study identifies endowment pools by code and indicates each pool's investment objective, approximate market value, the percentage in cash and short-term investments as of June 30, 1973, and June 30, 1974, the percentage in equities as of June 30, 1973, and June 30, 1974, fund characteristic and fund composition, and percentage in senior securities and miscellaneous assets as of June 30, 1973, and June 30, 1974. The investment objective coding used is (1) total return, (2) balanced, and (3) income oriented. (Author/JMF)

HEU06438

National Association of College and University

Business Officers

U.S. OEPARTMENT OF HEALTH, EQUCATION & WELFARE NATIONAL INSTITUTE OF EQUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT POINTS OF VIEW OR OPINIONS ATING IT POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Results of the 1974 NACUBO Comparative Performance Study and

Investment Questionnaire

PREFACE

The NACUBO Comparative Performance Study was begun in 1971 — as an expansion of the survey conducted in prior years by Dartmouth College — to provide participating institutions with performance data on their endowment pools. Institutions participating in the Study, along with other interested institutions, also supply information on their endowment funds through the annual NACUBO Investment Questionnaire. The results of both the Study and the Questionnaire for 1974 are contained herein.

Participating institutions receive in addition to this report a summary sheet indicating their performance data. Appendixes III and IV of this report -- which provide statistical summaries of the S & P 500 and Dow Jones Indexes -- are similar to the summary sheets furnished to participating institutions.

The confidential nature of participant responses to investment performance questions has been maintained through use of code numbers. However, select non-performance data have been identified by institution in the belief that this information is most useful when so identified. These data are reported in Exhibits 4 (Endowment Market Value as of June 30, 1974), 5 (Total Return Spending Formulas), and 6 (Method of Bond Pricing).

Funds for support of this project have been provided by The Ford Foundation.

National Association of College and University Business Officers • One Dupont Circle, Suite 510, Washington, D. C.



RESULTS OF NACUBO 1974 COMPARATIVE PERFORMANCE STUDY AND INVESTMENT QUESTIONNAIRE

TABLE OF CONTENTS

		••	Pages
		UBO 1974 Comparative Performance Study Questionnaire	1-17
EXHI	BITS		• **
1	L	1974 NACUBO Comparative Performance Study - Participating Institutions	
2	2	1974 NACUBO Comparative Performance Study - Characteristics of Participating Endowment Pools	
	3	1974 NACUBO Comparative Performance Study - Average Total Return of Institutions by Period, Investment Objective, and Endowment Size	•
	4	1974 NACUBO Investment Questionnaire - Endowment Market Value as of June 30, 1974, of 145 Responding Institutions	
	5	1974 NACUBO Investment Questionnaire - Total Return Spending Formulas for 25 Institutions	
(6	1974 NACUBO Investment Questionnaire - Method of Bond Pricing	
<u>APP1</u>	<u>ENDIXES</u>		
	I	Explanation of Figure Used for Measuring Performance of Portfolio Manager	
	II	Performance of Pooled Investment Funds - Explanation of Computations	
•	III .	Statistical Summary Sheet - S & P 500	
	TV	Statistical Summary Sheet - Dow Jones	



RESULTS OF NACUBO 1974 COMPARATIVE PERFORMANCE STUDY

AND INVESTMENT QUESTIONNAIRE

Participation

The 1974 Comparative Performance Study includes 150 endowment pools representing 136 institutions (Exhibit 1). The market value of the pools which provided information as of June 30, 1974, was 6.9 billion dollars. Since the inception of the NACUBO Comparative Performance Study in 1971 participation has been:

Year	Number of Institutions	Number of Pools
1974	136	150
1973	136	150
1972	133	1 44
1971	106	112

Endowment Pool Information and Performance Aggregation

The 1974 Study identifies endowment pools by code. Also indicated is each pool's investment objective, approximate market value, the percentage in cash and short-term investments as of June 30, 1973, and June 30, 1974, the percentage in equities as of June 30, 1973, and June 30, 1974, fund characteristic and fund composition, and percentage in senior securities and miscellaneous assets as of June 30, 1973, and June 30, 1974 (see Exhibit 2).

The investment objective coding used is (1) total return, (2) balanced, and (3) income oriented. The definitions of investment objectives of endowment pools are as follows:

- 1) Total Return Investment returns are sought from both market appreciation and dividends and interest; current income requirements generally do not dictate the kind of securities that may be held as primary emphasis is on long-term overall return.
- The pooled funds are invested in such a manner as to minimize investment risks without unduly sacrificing current income or the possibility for some long-term growth. This is usually done by investing a portion of the pool in fixed income securities.
- 3) Income Oriented Investment policy is dictated by current income needs; market appreciation is never utilized for current operating purposes and primary emphasis is on current income maximization.



Endowment pool size has also been coded for each institution, and the parameters used and number in each grouping are as follows:

	Number In Each Group
A - Greater than \$100 million	19
B - \$50 to \$100 million	14
C - \$25 to \$50 million	14
D - \$10 to \$25 million	29
E - \$5 to \$10 million	26
F - Under \$5 million	<u>45</u>
TOTAL	<u>147</u>

Performance comparisons of all endowment pools participating in the 1974 Comparative Performance Study are shown in Exhibit 3 - Part A. The time periods used to measure performance were the ten-, five-, three-, and one-year periods ending June 30, 1974. The fund characteristic and fund composition of the pools supplying this information are as follows:

Fund Characteristic

	Percent Answering	Number Answering	
(1	77	113	This is an official pooled endowment fund.
(2)) 3 .	4	This is an official pooled life income fund.
(3)	4	6	This is a separately invested fund which was unitized to enable performance to be accurately measured.
(4)	9	13	This is a .ombination of more than one separately invested unitized fund.
(5)	7	_11	This is a pool consisting of only those assets over which management has discretion.
	100	147	TOTAL



Fund Composition

	Percent Answering	Number <u>Answering</u>	· ·
(1)) 19	27	All invested funds, endowment, quasi-endowment, and funds invested for plant or other purposes but temporarily invested in the pool.
(2) 63	93	Endowment and quasi-endowment.
(3) 14 -	21	Endowment only.
(4) 4	6	Quasi-endowment only.
	100	147	TOTAL

Investment performance was also grouped and compared by the investment objective of the endowment pool. Of the total, 57 pools or 39 percent follow a total return investment philosophy, and 90 pools or 61 percent follow a balanced or income oriented philosophy. These latter two investment objectives were grouped together in order to obtain a more meaningful number of observations for comparative purposes (only 7 institutions indicated an income oriented investment objective). Information relating to institutions applying total return in terms of determining a prudent call on endowment via both yield and appreciation can be found on pages 16 and 17. Exhibit 3 - Part B shows performance results for the five-, three-, and one-year periods ending June 30, 1974.

Performance was grouped into three categories by market value size of endowment pools. Category 1 includes 33 endowment pools that are classified A and B, pools of \$50 million or more. Category 2 includes 43 endowment pools that are classified C and D and hence are pools which range in market value between \$10 to \$50 million. Category 3 includes 71 endowment pools that are classified E and F, pools whose market value is \$10 million or less. The total market value of the endowment pools in categories 1, 2, and 3 is \$5.6 billion, \$1 billion, and \$300 million, respectively. Exhibit 3 - Part C shows the performance results for the five-, three-, and one-year periods ending June 30, 1974.

Performance

Table I summarizes the average performance of institutions based on the various groupings for the ten-, five-, three-, and one-year periods ending June 30, 1974. Also shown are a number of indexes. The inclusion in the table of the indexes is a result of their being widely followed benchmarks. It should be realized that endowment pools characteristically have significant fixed income obligations and that the indexes are 100 percent in equities. During the periods covered in this study, pools with an investment objective of being balanced or income oriented had relatively better performance.





TABLE I - AVERAGE PERFORMANCE

Group	10 Year	5 Year	3 Year	1 Year
All Institutions	3.03%	1.15%	-1.37%	-11.43%
Total Return Investment Objective	N/C	1.04%	-1.98%	-12.68%
Balanced or Income Oriented Investment Objective	N/C	1.37%	79%	-10.56%
Market Size Over \$50 Million	N/C	1.42%	-1.55%	-12.48%
Market Size \$10-\$50 Million	N/C	1.00%	-1.32%	-12.46%
Market Size Under \$10 Million	N/C	1.31%	-1.09%	-10.2 %
Dow Jones	3.37%	2.15%	.23%	- 6.10%
S & P` 425	4.35%	1.23%	-1.11%	-13.74%
S & P 500	3.85%	. 80%	-1.74%	-14.49%

N/C - Performancé measurement over a ten-year period not calculated

Asset Composition and Market Timing

A summary of all of the endowment pools providing information about the aggregate composition of their portfolios indicates the following:

- The average percentage in equities was 66.5 as of June 30, 1973, and 60.4 as of June 30, 1974.
- The average percentage in senior securities was 20.7 as of June 30, 1973, and 21.9 as of June 30, 1974.
- The average percentage in cash was 8.6 as of June 30, 1973, and 13.1 as of June 30, 1974.
- The average percentage in miscellaneous assets was 4.2 as of June 30, 1973, and 4.7 as of June 30, 1974.

Some observations can be made in terms of how well the average institution recognized the approaching decline in both the stock market and the bond market in 1973-74. While it cannot be determined exactly when conscious shifts were made among investment vehicles, it does seem clear that shifting did occur. If no shift had been made between types of securities and if market values moved in accordance with the general market, then a prediction of ending asset values can be obtained through use of the S&P Index and the



Salomon Index. This prediction is shown in column 3 of Table II. The actual results shown in columns 2 and 4 indicate that there was in effect no change in senior securities, but that a change in the percentage of equities and cash for the fiscal year 1973-74 appears indeed to be the result of a shifting of assets and not solely market performance. If the stocks held by institutions were less volatile than the market, then the move out of equities and into cash was even greater.

TABLE II - ASSET COMPOSITION - ALL ENDOWMENT POOLS

Col 1	Co1 2 '	Col 3	Col 4	•
<u>Asset</u>	Actual <u>6/30/73</u>	Predicted 6/30/74	Actual <u>6/30/74</u>	
Equities Senior Securities Cash Miscellaneous	66.5% 20.7% 8.6% 4.2%	64.4% 20.6% 10.1% 4.9%	60.4% 21.9% 13.1% 4.7%	
TOTAL	\$7.8 Bill:	ion	\$6.9 Billi	on

NOTE The S&P 500 and Salomon Brothers Index declined 17.5 percent and 14.1 percent, respectively, from June 30, 1973, to June 30, 1974. Cash and miscellaneous assets were assumed to have experienced zero appreciation.

Tables III and IV show the same analysis as Table II, but endowment pools have been grouped by their investment objective, i.e., either (1) total return (T/R) or (2) balanced or income oriented (B/I).

TABLE III - ASSET COMPOSITION - TOTAL RETURN POOLS

<u>Asset</u>	Actual <u>6/30/73</u>	Predicted 6/30/74	Actual <u>6/30/74</u>	
Equities	73.0%	70.7%	65.6%	
Senior Securities	14.4%	14.5%	14.6%	
Cash	9.0%	10.6%	15.6%	
Miscellaneous	3.6%	4.2%	4.2%	
TOTAL	\$3.73 Bil	lion	\$3.14 Bil	lion



TABLE IV - ASSET COMPOSITION - BALANCED OR INCOME POOLS

Asset	Actual 6/30/73	Predicted 6/30/74	Actual 6/30/74
Equities	, 62.5%	60.5%	57.0%
Senior Securities	24.5%	24.4%	26.4%
Cash	8.3%	9.7%	11.6%
Miscellaneous	4.6%	5.4%	5.0%
TOTAL	\$4.11 Bill	ion.	\$3.72 Billion

As might be expected the percentage of senior securities held by T/R versus B/I pools was considerably lower on June 30 for both 1973 and 1974. Conversely, equities for T/R pools was considerably higher than B/I pools. While the percentage of senior securities as of June 30 for both years remained fairly constant for both T/R and B/I pools, the percentage in equities for the two groups declined significantly over the 1973-74 fiscal year. The cash positions of T/R pools were very similar to those of B/I pools for 1973 but comparatively higher for T/R pools in 1974. The strategy in investing T/R pools appeared to place additional emphasis on cash to offset the greater exposure to equities. In comparison with the 1973 NACUBO Comparative Performance Study it is interesting to note that the percentage of endowment pools classified as either T/R or B/I in terms of their investment objective is fairly similar to the 39 percent total return, 61 percent balanced or income oriented investment objective distribution this year. This might indicate that any restructuring of assets was for the most part being made in conjunction with a consistent investment objective.

The asset composition of the endowment pools based on market size as of June 30, 1973, and June 30, 1974, is shown on Table V.

TABLE V - ASSET COMPOSITION - ENDOWMENT SIZE

Asset 6/30/74	Category 3 Over \$50 Million	Category 2 \$10-\$50 Million	Category 1 <u>Under \$10 Million</u>
Equities	56.7%	64.4%	63 % 19.1% 13.5% 4.7%
Senior Securities	25.5%	18.1%	
Cash	13.7%	12.0%	
Miscellaneous	4.1%	5.7%	
TOTAL MARKET VALU		\$980 Million	\$5.6 Billion
Asset 6/30/73	Category 3	Category 2	Category l
	Over \$50 Million	\$10-\$50 Million	Under \$10 Million
Equities	63 %	70.2%	69.4%
Senior Securities	23.3%	17.5%	19.1%
Cash	9.8%	7.2%	7.5%
Miscellaneous	3.6%	5.4%	4.1%
TOTAL	\$335 Million	\$1.1 Billion	\$6.4 Billion

In each size category the percentage of senior securities at fiscal year end 1973 and 1974 has remained relatively stable. This is consistent with observations of senior security assets for endowment pools classified by investment objective as well as for all endowment pools together. Table V appears to indicate that institutions in general did not recognize or attempt to compensate for a forthcoming decline in the bond market. Further, it should be noted that category 3 institutions were considerably less equity and more senior security oriented than categories 2 and 1. This is probably the primary reason the category 3 pools experienced somewhat better performance in fiscal 1973-74 than the other two categories.

Non-Controllable Assets

Of the 147 pools, 115 had non-controllable assets of 5 percent or less, 23 had non-controllable assets of between 5 and 15 percent, 5 between 15 and 25 percent, and one institution had non-controllable assets of greater than 25 percent. Non-controllable assets for all endowment pools represented 3.9 percent of the total assets of the endowment pools as of June 30, 1974. This small amount of non-controllable assets is encouraging in terms of the validity of the CPS. NACUBO will endeavor to aid institutions in refining their unit value calculations to further reduce non-controllable assets.

General Information

Of the 147 institutions which responded to the questionnaire 125 have fiscal years ending June 30; 1 has a fiscal year ending December 31; 1 ending March 31; 10 ending May 31; 9 ending August 31; and 1 ending September 30.

The distribution and size of the 145 institutions reporting endowment size (Exhibit 4) as of June 30, 1974 are:

		,	Number	Percent of 145 Answering
A)	Greater than \$100 million	•	18	1 2%
B)	\$50 to \$100 million		15	10%
/ C)	\$25 to \$50 million		17	12%
D)	\$10 to \$25 million		33	23%
E)	\$5 to \$10 million	*	24	17%
F)	Under \$5 million		<u>38</u>	<u> 26%</u>
	TOTAL		<u>145</u>	100%

The 145 institutions indicated that their total market value as of June 30, 1973, and June 30, 1974, was \$8.6 and \$7.46 billion, respectively, a 13.3 percent decline in asset value for the June 30, 1973-74, fiscal year.



One hundred twenty-eight institutions reported that during fiscal 1973-74 they received a total of \$219 million in new gifts. By subtracting the total 1973-74 gifts from the year end market value of endowments and dividing by the beginning market value, one can compute a crude performance estimate of -16.7 percent. It should be realized that this is a rough estimate as net additions and the time flow of gifts are not taken into consideration. Accurate performance is best measured via the Comparative Performance Study, but these figures are a useful indication of the experience of endowments for the fiscal year. The CPS figure of average unit value appreciation for the 150 pools measured was -15.5 percent.

The average institution on June 30, 1974, had a market value of \$51.4 million, received \$1.7 million in new gifts during the year, and had realized and unrealized losses of \$6.5 million. The median institution on June 30, 1974, had a market value of \$13.5 million, received \$.4 million in gifts, and had realized and unrealized losses of \$.9 million. The average yield (dividends and interest divided by the average of the beginning and ending year market value for the institutions) was 4.93 percent.

Private and State Supported Institutions

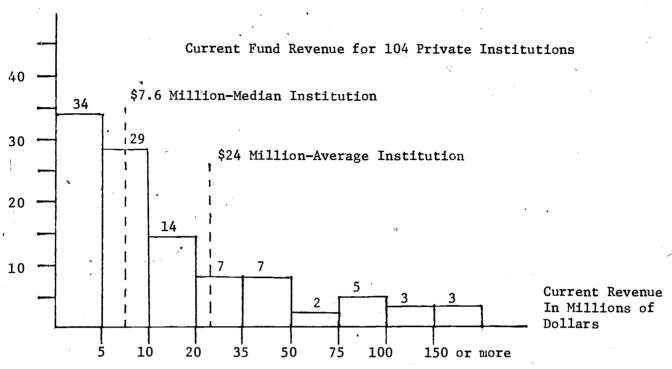
The responses to this portion of the questionnaire have been aggregated in terms of the private and state supported institutions in order to provide more meaningful information. Of the 147 institutions the average endowment size of the 115 private and 32 state supported institutions is \$58 and \$31.9 million, respectively. The median endowment size is \$17.2 million and \$8.3 million. The average amount received in new gifts is \$2 million for private institutions and \$.6 million for state institutions. The median is \$.44 million and \$.24 million.

Current Fund Revenue and Endowment Income

Current fund revenue for both private and public institutions is portrayed in graphs I and II. It can be seen from graph I that 34 private and 2 state supported institutions had current fund revenues of less than \$5 million, 29 private and 1 state institution had current fund revenue of \$5 to \$10 million, etc. Graph II shows, for example, that 7 private institutions or 6.3 percent (7/103) of all private institutions responding and 17 state institutions or 63 percent (17/27) of all state institutions responding received income from endowment constituting less than 1 percent of current fund revenue, etc. The average amount of current fund revenue for private and state institutions is \$24 million and \$150 million, respectively. The median figure is \$7.6 million and \$98 million. The average percent of endowment income to current fund revenue for private and state institutions is 12.4 percent and 2.3 percent. The median figure is 8.1 percent and .4 percent. Because in general the role of endowment income as a source of current fund revenue compared to total current fund revenue is relatively insignificant for state supported institutions, and far more important for private institutions (graph II), the emphasis in this section is devoted primarily to reporting results for private institutions.

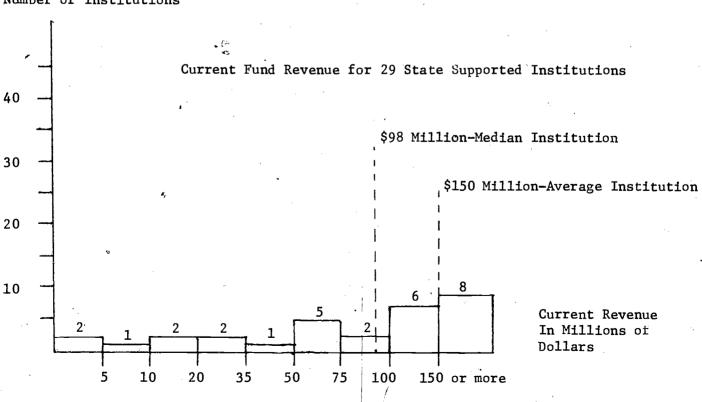
GRAPH I - PRIVATE

Number of Institutions

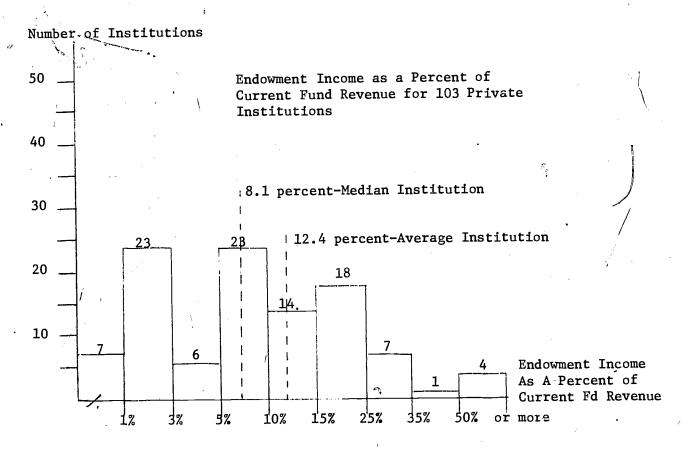


GRAPH I - PRIVATE

Number of Institutions

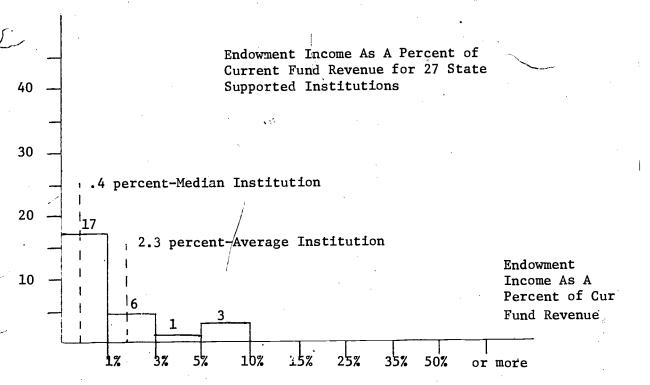


GRAPH II - PRIVATE



GRAPH II - PUBLIC

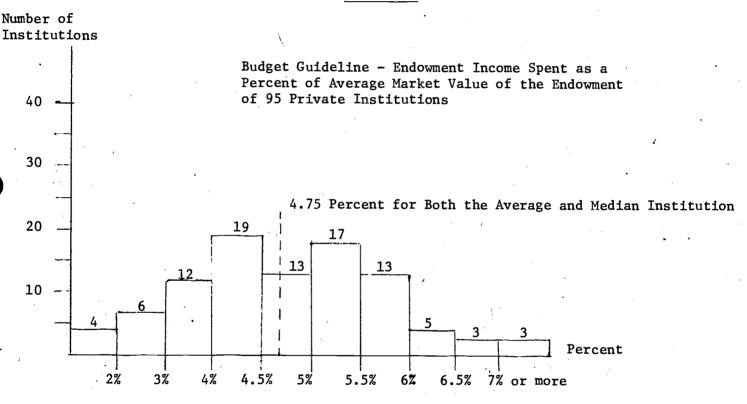
Number of Institutions



Budget Guideline

Graph III illustrates the amount of endowment income spent in current operations as a percentage of the average market value. This percentage is the amount being utilized from the endowment during the fiscal year to help meet the current budget. In a sense this is a budget guideline showing what institutions during fiscal 1973-74 contributed from their total endowment to support their immediate needs. The budget guideline for both the average and median institution was 4.75 percent.

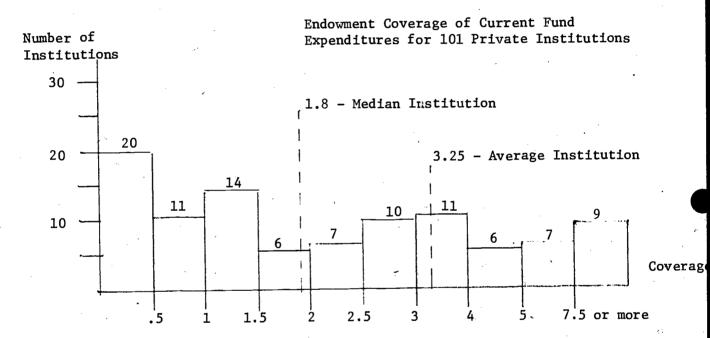
GRAPH III



Endowment Coverage

Graph IV shows the distribution of 101 private institutions in terms of their average endowment as of June 30, 1973, and June 30, 1974, divided by the current fund expenditures. For example, in 9 institutions the average market value of the endowment was 7.5 times greater than current fund expenditures. On the other hand, 20 institutions could not cover 50 percent of their current fund expenditures with their entire endowment. The endowment of the average institution is 3.25 times greater than current fund expenditures. The endowment of the median institution is 1.8 times greater.

GRAPH IV



Endowment Support

Endowment principal and income per full time equivalent (FTE) student and per faculty member for private institutions are shown in Tables VI through IX. Endowment support for approximately 75 percent of the state institutions responding was the following:

	Average	Median
Less than \$1,000 in principal per FTE student Less than \$100 in income per FTE student	\$ 1,430	\$ 250 15
Less than \$25,000 in principal per faculty member	21,300	4,200
Less than \$1,000 in income per faculty member	1,030	210



PRIVATE INSTITUTIONS - ENDOWMENT PRINCIPAL AND

INCOME PER FTE STUDENT AND PER FACULTY MEMBER (Tables VI-IX)

TABLE VI

TABLE VII

Endowment Principal per		Endowment Income per F	
Amount	Number of Institutions	Amount	Number of Institutions
Less than \$1,000	13	Less than \$100	24
\$1,000 to \$5,000	26	\$100 to \$200	13
\$5,000 to \$10,000	19	\$200 to \$300	6
\$10,000 to \$15,000	10	\$300 to \$500	14
\$15,000 to \$20,000	11	\$500 to \$750	8
\$20,000 to \$25,000	1 .	\$750 to \$1,000	14
\$25,000 to \$35,000	8	\$1,000 to \$1,500	5
\$35,000 to \$50,000	6	\$1,500 to \$2,000	7
\$50,000 to \$75,000	6	\$2,000 to \$4,000	10
Greater than \$75,000	1	Greater than \$4,000	1_
TOTAL	<u>101</u>	TOTAL	<u>102</u>
AVERAGE INSTITUTION	\$14,800	AVERAGE INSTITUTION	\$800
MEDIAN INSTITUTION	\$ 8,200	MEDIAN INSTITUTION	\$430



TABLE VIII

TABLE IX

Endowment Principal Per	Faculty Member	Endowment Income Per I	Faculty Member
Amount	Number of Institutions	Amount	Number of Institutions
Less than \$25,000	21	Less than \$1,000	16
\$25,000 to \$50,000	14	\$1,000 to \$2,000	11
\$50,000 to \$75,000	8	\$2,000 to \$3,000	8 .
\$75,000 to \$100,000	7	\$3,000 to \$4,000	6
\$100,000 to \$125,000	7	\$4,000 to \$5,000	7
\$125,000 to \$150,000	5	\$5,000 to \$7,500	13
\$150,000 to \$200,000	12	\$7,500 to \$10,000	9
\$200,000 to \$300,000	9	\$10,000 to \$15,000	10
\$300,000 to \$400,000	7 .	\$15,000 to \$20,000	8
Greater than \$400,000	_9	Greater than \$20,000	<u>11</u>
TOTAL	<u>99</u>	TOTAL	99
AVERAGE INSTITUTION	\$148,000	AVERAGE INSTITUTION	\$ 8,100
MEDIAN INSTITUTION	\$100,000	MEDIAN INSTITUTION	\$ 5,100

Use of Investment Advisors

Of the 136 institutions responding to the question referring to the use of outside investment advisors, 102 or 75 percent indicated that they use outside advisors, 34 or 25 percent indicated that they did not. The market sizes of endowments as of June 30, 1974, of those institutions not using outside advisors, were: 19 under \$10 million, 3 between \$10 and \$25 million, 1 between \$25 and \$50 million, 2 between \$50 and \$100 million, and 8 over \$100 million. It is believed that these 8 institutions with endowments over \$100 million all maintain professional in-house staffs. One institution did not indicate the size of its endowment as of June 30, 1974.

Security Lending

The 143 institutions answering the security lending portion of the questionnaire were grouped by market value size of endowment as of June 30, 1974:

	Number <u>Answering</u>	Percentage <u>Answering</u>
Over \$65 million	28	20
\$40 to \$65 million	9	6
\$20 - \$40 million	19	13
\$10 - \$20 million	25	18
Under \$10 million	<u>61</u>	43
TOTAL	<u>142</u> *	100

*NOTE: One institution did not indicate its market value.



Of the 143 institutions responding to the question pertaining to participation in security lending the responses were as follows:

	Number Answering	Percent Answering
My institution has not considered lending securities.	62	43
My institution is in the process of considering lending securities.	18	13
My institution considered lending securities but felt it not appropriate to participate in such a program.	29	20
My institution participates in security lending.	<u>34</u>	24
TOTAL	<u>143</u>	100%

Table X shows a breakdown by endowment size of institutional response to participation in security lending.

		TABLE X				
Lending Position	Under \$10 million	\$10-20 million	\$20-40 million	\$40-65 million	Over \$65 million	<u>Total</u>
Not Considered Considering Not Appropriate Lends Securities	46 5 8 _2	- 11 3 9 <u>2</u>	3 6 6 4	0 1 4 <u>4</u>	1 3 2 22	61 18 29 34
TOTAL	<u>61</u>	<u>25</u>	<u>19</u>	<u>9</u>	28	<u>142</u>

Of the 34 institutions participating in security lending the responses in terms of operational framework are as follows:

	Number <u>Answering</u>	Percent Answering
My institution handles its securit lending program internally.	y	67
Our custodian bank handles our security lending program.	6	18
Our outside investment advisor handles our security lending.	4	12
Other	<u>1</u> ,	3
TOTAL	34	100%

Thirty-two institutions responded as follows concerning the inception date of their security lending program:

Inception Date	Number <u>Answering</u>	Cumulative <u>Total</u>
Prior to 12/31/70	. 5	5
Calendar 1971	7	12
Calendar 1972	9	21
Calendar 1973	5	26
Calendar 1974	6	32

It appears that participation by institutions in security lending is not a recent phenomenon of the high, short-term interest rates that were available to institutions during fiscal 1973-74.

Total Return (Yield and Appreciation)

In terms of applying the total return concept (the spending of yield plus a prudent portion of appreciation) to help meet current year expenses, 142 institutions responded as follows:

	Number <u>Answering</u>	Percent Answering
Applies T/R concept for budgeting Does not apply the T/R concept for	51	36
budgeting	91	_64_
TOTAL	<u>142</u>	100%

Of the 51 institutions applying total return for budgeting 3 or 6 percent apply T/R to true endowment only, 10 or 20 percent to quasi endowment only, and 36 or 72 percent to both true and quasi endowment. One institution did not answer this question. For the 50 institutions reporting their market valuation and indicating the use of total return for budgeting purposes, the results were as follows:

Market Value as of June 30, 1974	Number <u>Answering</u>		Percent Answering
Over \$100 million \$50 to \$100 million \$25 to \$50 million \$10 to \$25 million \$5 to \$10 million Under \$5 million	11 8 5 13 5 <u>8</u>		22 16 10 26 10
TOTAL	<u>50</u>	/	100%



These responses indicate that there does not seem to be a correlation between endowment size and the adoption of T/R for budgeting purposes, nor does there appear to be a correlation between endowment size and fund application (true, quasi, or both) in using T/R for budgeting; that is, of the 10 institutions applying T/R to quasi endowment only, the size of the endowment did not fall into any particular range. The same was true for those 36 institutions applying T/R to both true and quasi endowment. Only three institutions responded that T/R is applied to true endowment only.

Total Return Spending Formulas

Of the 51 institutions answering that they adopted total return for budgeting purposes, 25 described their method of application (Exhibit 5). An overview of responses shows that most institutions determine the amount of total return to be drawn from endowment based on a formula. The formula is usually a function of the endowment market value upon which a spending percentage is applied.

Approximately one-third of the responding institutions use the most recent three-year market average to determine the base upon which to apply the spending rate. Approximately one-fifth of the institutions responding indicate that they too use a three-year average but set the average back one year. The one-year set-back allows additional flexibility in budgeting as the draw on endowment can be determined a year earlier. For example, an institution for the budgeted year 1976-77 could calculate on June 30, 1975, the amount to be spent on endowment based on valuations for 1972-73, 1973-74, and 1974-75. It should be pointed out that it appears that only a handful of institutions are using year end valuations in determining their market base and that most are using quarterly and some monthly valuations. A few institutions average their calculations over a five-year period and some over only a one-year period.

The most common rate applied to the endowment market base is 5 percent; two institutions apply 4 percent and one 6 percent. Many formulas are not straightforward and have adjustment factors to the rate applied and the market value as well. For example, one institution with a one-year lag formula adds to its average market value the average net additions received. Another applies total return to its common stock investments only. Another applies an additional smoothing technique. Also, there seems to be a variance in spending rates depending upon whether funds are being applied to true endowment or to quasi endowment.

Finally, it appears that a number of the institutions applying total return have either recently revised or are in the process of revising their formula.

Bond Pricing

The results of the responses to a question on how institutions price bonds are shown in Exhibit 6. This matter will be pursued further and described in greater detail in succeeding reports.



1974 NACUBO COMPARATIVE PERFORMANCE STUDY

PARTICIPATING INSTITUTIONS

Academy of the New Church Agnes Scott College Albion College Alfred University Allegheny College Alma College Amherst College Atlantic Christian College Babson College Baldwin-Wallace College Barnard College Bates College Berea College Berry College Bowdoin College Bowling Green State University Brandeis University Brown University Bryn Mawr College Bucknell College California Institute of Technology Carleton College Carnegie-Mellon University Carroll College (Wisconsin) Case Western Reserve University Catholic University of America Coe College Colgate University College of Wooster Colorado College Columbia University Columbia University Teachers College Cooper Union Cornell University Creighton University Dartmouth College Denison University Dickinson College Drake University Drew University Eastern Michigan University Franklin and Marshall College Furman University George Washington University

Hamline University Hampton Institute Harvard University Hendrix College Indiana University John Carroll University Johns Hopkins University Kansas State Teachers College Kenyon College Lafayette College Lawrence University Lehigh University Long Island University Lynchburg College Macalester College McGill University Medical College of Pennsylvania Mercer University Miami University Michigan State University Middlebury College Mills College Monmouth College (New Jersey) Mount Holyoke College Muhlenberg College New York University Northwestern University Oakland University Oberlin College Occidental College Ohio Wesleyan University Oregon State Higher Education System Pacific School of Religion Pennsylvania State University Philadelphia College of Textiles and Science Princeton Theological Seminary Princeton University Principia College Rensselaer Polytechnic Institute Rhode Island School of Design Rice University Rollins College Rutgers, The State University St. John's College Simmons College Smith College Stanford University

Page 2

State University of New York at Binghamton State University of New York at Buffalo Stephens College Swarthmore College Sweet Briar College Tufts University University of Arizona University of Arkansas University of California University of Chicago University of Connecticut University of Delaware University of Denver University of Evansville University of Illinois University of Michigan University of Minnesota University of Mississippi University of Missouri University of Nevada University of North Carolina at Greensboro University of Pennsylvania University of Pittsburgh University of Puget Sound University of Rochester University of San Francisco University of Santa Clara University of Tennessee University of Utah University of Vermont University of Virginia University of Wisconsin Vanderbilt University Virginia Military Institute Wake Forest University Washington State University Washington University Wayne State University Wells College Wesleyan College Whittier College Willamette University Williams College Worcester Polytechnic Institute

136 participating institutions

Yale University

1974 NACUBO COMPARATIVE PERFORMANCE STUDY

CHARACTERISTICS OF PARTICIPATING ENDOWMENT POOLS

Number	Code	Investment <u>Objective</u> l	Market Value Size ²	Percentage in Cash 6/30/73 6/30	entage Cash 6/30/74	Perce in E 6/30/73	Percentage in Equity 0/73 6/30/74	Fund Charac- teristic ³	Fund Compo- sition ⁴	Percen Senior S 6/30/73	Percentage in nior Securities 30/73 6/30/74	Percentage in Misc. Assets 6/30/73 6/30/7	Assets 6/30/74
-	el	. -1	щ	0	. 9	92	82	Н	. 2	œ	12	0	0
7	e2.	m	D	9	႕	69	53	П	က	24	44	Н	7
m ,	e3	7	Д	0	П	80	81	1	2	19	17	H	7
7	e4	2	F 4	0	5	. 99	57	П	ന	34	38	0	0
'n	e5	H	PÅ	ന	ന	89	88	П	2	∞	10	0	0
. •	eę	1	ပ ်	7	ō	78	. 73	7	7	10	6	œ	6
7	e7	-	田	19	17	09	62	-	2	0	0	21	21
80	ဓိ	2	Α .	œ	24	72	53	7	7	12	. 14	∞	6 . 1
6	e9	П	ĮΉ	' م	11	88	85	7	4	ო	. 4	0	0
10	· e10	مه	ы	9	13	42	46	П	T	51	38	2	Э
11	e11	, H	A	ιΩ	5	85	83	Н	ᅮ	10	12	0	0
12	e12	7	/ Æ4	n/a	6	n/a	7.5	Н	2	n/a	16	n/a	0
13	e13	. 2	교	П	2	55	20	7	7	36	41	æ	80
14	e15	7	ပ	ۍ	5	73	71	-	H	21	18	0	9
15	e16	7	D	20	28	94	55	П	7	.6	6	7.	80
16	e17	2	ပ		24	. 29	61	.	7	19	7	7	80
17	e18	1	Д	ᄅ	7	92	88	J.	ᆸ	9	9	7	2
18	e19	Н	Д	7	10	81	92	1	7	17	15	0	0
19	e20	2	Q	m ·	16	86	20	H	2	10	12	-	-2
20	e21	2	Ф	13	∞	99	65	Т	က	19	24	2	· •
. 21	e22	ന	闰	9	10	65	31	T T	က	45	59	0	0 .
22	e23	,	도	6	7	69	58	7	2	22	. 40	0	0
23	e24	ч	ьį	7	7	72	77	4	2	24	21	0	0
24	e25	-	М	0	0	100	100	5	2	0	0	0	0
25	e26	H	ы	H	6	91	06	-	7	0	0	П	п

Footnotes: for explanation of codes

1See page 1
2See page 2
3See page 2
\text{N} 4See page 3



Number

25

ERĬC

LSee page 1
2See page 2
3See page 2

	1																																							
tage in Assets	6/30/74	7	0	0	16	10	0	က	C	0	0	0	0'	0	0	0	9	က	10	. ∞	35	7	· rV	œ	15	12	0	7	6	6	П	7	0	0	က	0	EXH] Page			2
Percentage Misc. Asset	6/30/73	П	0	0	13	∞	0	2	o ,	0,	0	7	0	0	0	0	9	7	6	7	32	5	· 10	4	15	22	0	2	∞	œ	т.	9	0	ო	7	0				
Percentage inSenior Securities	6/30/74	20	65	21	21	42	35	30	19	35	39	10	4	23	45	41	13		18	6	4	П	33	27	17	.33	10	30	13	11	45	11	31	45	19	30				
Percentage Senfor Securi	6/30/73	21	7.5	20	29	41	∞	29	23	25	45	11 .	. 2	23	37	35	12		19	6	. 15	2	36	21	0	24	15	27	14	12	36	∞	35	33	17	20				
Fund	sition 4	5	7	2	П	2	က	П	2	2	m	5	4	2	2	7	ო	-	l m	2	7	7	ļ m	2	5	-	2	2	2	7	2	П	2	1	7	Т				
Fund	teristic 3	1	2	႕	Н	7	Н	4	щ	7	1	5	П	H	П	Н	Н	Н	-	m	·	l cri) 	l 	ı - -	-	Ŋ	, H	Н	Ŋ	Т	П	1	П	-	1				
ntage	6/30/74	59	33	57	53	39	51	99	39	52	39	84	72	71	55	59	80	77	62	65	53	82	1 (2)	5.9	5.4	. 55	57	62	92	65	45		55	54	57	29				
Percentage	1n E 6/30/73	73	19	99	57	45	71	89	55	94	48	63	84	77	63	59	82	79	, 63	92	09	29	54	, n.	67	49	71	99	77	177	20	89	99	61.	29	9/	,	,		
tage	6/30/74	19	. 2	22	11	6	14	Н	43	14	23	9	25	. 9	0	0	· 	15	10	16	œ) [6	· C		0	33	9	7	16	10	17	14	0	21	ന		-		
Percentage	1n cash 6/30/73 6/3	7	9	17	2	9	21	п	22	11	7	24	14	0	0,	0	·		0 00	o oc	2 (27	, _C	20	, œ	ا بر	14		Н	က	13	18	2	M	13	7				
Market	Value Size 2	А	ĹŦ	A P	щ	Ą	ഥ	Q	ĽΨ	ഥ	曰	ഥ	ഥ	ഥ	[4	ſΞ	je je	C	o O	į.	ı C) F	A PC) [<u>r</u>	i Er	ı C	· H	ഥ	Ą	Д	ပ	妇	o ,	[-	Q	P				
	Investment Objective1	H	က	П	2	7	2	Н	2	2	က	2	2	2	2	2	2	1 -	7	۱ ۵	, 1 %	ı –	٦ ٥	۱ ۵	۰ د	ı —	ı 	7	П	Н	7	Н	H	Н	_. H	1	1 0000	раве 1	page 2	page 3
. ·	Code	. 69a	e70	e71	e72	e73	e74	e75	e76	e77	e78	e79	e80	e81	e82	683	e84		; ·;	קי	3 6	3 6) g	ر (3.5	.12 .12	c13	c14	c15	c16	c17	c18	c19	c20	c21	c23	less n			
RIC.	Number	61		63	99	65	99	29	9	69	70	71	72	73	74	75	292	77	. 28	62	.) (7 6 6	. «	2 20	. %	8 8	87	88	68	8	91	92	93	94	95	٧		26	ò

1See page 1
2See page 2
3See page 2
4See page 3

EXHIBIT 2

Page 4

_	rcentage in sc. Assets	30/73 6/30/74	٠,			. ·	ი (0 0	0 6			11 14		o (0	0		,		pro	0 0	0	2 5			1.3	-1 C) r			0 0	0	o.·	7 7		ם ר רר	4	
	entage in Securities	73 6/30/74 6/	. 53	26	, 22	28	14	10	34	ر 9	0 1	v.	m (L3	7	. 19	13	0	34	19	49	7	45	9. 9.	34	77	ð	7 .	36	21	7	09	47	11,	07	53	07	* ,
•	. v	sition4 6/30/	1 41	2 25	2 28	1 25	2 13	3 11	2 33	2 56	2 0	2 6		⊣					2 41		2 44		2 42		36			† †		7		3 55				2 57		-:
	i, (teristic ³ si		-	5	т	-	-	- 1	Н	7	-	Н '	က	ᆫ	-1	. 7	-	-1	÷	-1	က ·	- 1	5	-	-	⊢,	- 1 ,	-1	- 1.	-	П.	-1	-	Н,		I	
		6/30/74 to	45	20	48	69	52	57	64	0 /	78	62		72		78	72	89	33	. 95	.50	90	53	.65	52	50.	52	73	61	74	32	. 41	53	. 74	09		46	r
		4 6/30/73	57	7.3	. 59	74	94	78	99	40	73	83	18	81	. 51	81	81	6	52	55	48	95	26	63	.52	26	61	93	29	80	75	45	09	79	62	43	20	
	enta Cas	73 6/30/74	ເ	7	23	2	28	32	5	⊢ 1	0	. 19	28	15	29	2	. 13	32	31	21	-1	∞	0	11	10	10	12	25	2	2	99	0	0	11	0	- 1 ;	19	,
	Market Pe Value	se ² 6/30/73	F 2		A 6	D. 1	A 13	7	A 1	五 2	F 0		E 2	•	F 45			П		-	· 6	E		F 21	н 8	A 7			E 2		F 23		F 0	D 4	п	C 0	ਜ 2	
	Mar Investment Va		7	2	2	. 2	2	, 2		2	2	Н		Н	2	2	1	П	2	2	7		2	H	2	2	2	~ -1	-1	Н	٦	T	2	Н	2	2	. 2	1
	H	Code	c24	c26	c27	c28	c29	c30	c31	c32	c33	c34	c35	c 39 ·	c40	c41	c42	c44	c45	c46	C47	c48	c49	c50	c51	c54	c55	c56	c57	c58	c59	c60	c62	c63	c64	c65	990	-
27		Number	96	97	86	66	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	

1See page 1
2See page 2
3See page 2
4S

27

Percentage in Misc. Assets	6/30/74		0	0.8	33	25	10	0	0	Н,	-1	0 ;	1:	23	O *	O 1	Ŋ	0	146	4.7
Percer Misc.	6/30/73	0	0	0	90	23	6	0	0	-	0	0	10	$\frac{22}{2}$	o	O	m	0	144	4. 2
Percentage in Senior Securities	6/30/74	33	16	0	7	-	33	26	17	9	35	45	32	32	9	12	27	10	146	21.9 19.4
Percen Senior S	6/30/73	28	11	0	7	ന	46	25	14	7	33	45	30	37	6	18	20	17	144	20.7 20
Fund Compo-	sition4	2	7	, 2	2	7	m	5	Н	. 2	5	5	2	2	. 2	2	2	2	147	
Fund Charac-	teristic ³	Н	н	-	Н	-	-	4	H	7	5	Н	ന	<i>г</i>	. 7	5	H	75	147	
ercentage in Equity	6/30/74	65	99	21	53	62	42	28	72	83	54	45	54	35	20	99	57	43	146	60.4 63
Percentage in Equity	6/30/73	69	84	19	55	63	39	43	72	90	53	46	28	36	81	72	69	52	144	66.5
Percentage in Cash	6/30/74	m	18	79	7	11	16	46	11	10	11	10	ო	10	25	22	11	97	146	13.1
Perce	6/30/73	4	4	81	6	11	7	, 32	14	2	13	6,	-	5	10	11	80	31	144	8.6
Market Value	Size ²	ഥ	ᄄ	щ	ы	Q	A	Ľų.	ĽΨ	Ą	ы	, [1]	ĽΉ	ы	U	띰	ľΨ	ഥ	147	•
Investment	Objective1	2	5	-1	2	2	2	2	-	٦	. 2	2	er .	2	2	2	2		147	rage
	Code	c67	890	690	c70	c71	c72	c73	c76	c77	c78	c79	c80	c81	c82	c84	c85	980		Average Weighted average
RIC	Number	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	TOTAL	Average Weighte

Period Ending June 30, 1974

AVERAGE TOTAL RETURN OF INSTITUTIONS BY PERIOD, INVESTMENT OBJECTIVE, AND ENDOWMENT SIZE

The 1974 NACUBO Comparative Performance Study is divided into three parts. Part A includes all endowment pools participating, Part B aggregates endowment pools by their investment objective — either total return, or balanced or income oriented — and Part C groups endowment pools by their market valuations as of June 30, 1974, into three categories. Category I of Part C includes endowment pools whose market value is \$50 million or greater, Category II includes endowment pools whose market value is between \$50 and \$10 million, and Category III includes endowment pools whose market value is \$10 million or less.

Included in all performance groupings are three indexes, the Dow Jones, S & P 500, and S & P 425. Their inclusion is a result of their being widely followed benchmarks. It should be realized that endowment pools characteristically have significant fixed income obligations and that the indexes are 100 percent in equities.

All groupings measure performance over the five-, three-, and one-year periods ending June 30, 1974. Part A also measures performance for the ten-year period ending June 30, 1974. Ten-year performance measurement for Parts B and C would not be meaningful.

The number of endowment pools and indexes in each grouping and the group performance are shown in Tables A and B, respectively.

TABLE A

PERIOD PARTICIPATION OF ENDOWMENT POOLS AND THREE INDEXES

10 Year 5 Year 3 Year 1 Year Grouping 77 120 142 153 All institutions Part A 59 60 50 Total Return Investment Objective Part B 83 93 Balanced or Income Oriented Objective N/C 70 35 36 Category I - \$50 Million or Greater N/C 31 Part C 45 46 41 Category II - \$50 to \$10 Million N/C 74 Category III - \$10 Million or Less N/C 51 65

NOTE: Three institutions supplied unit value and income per unit data only and therefore are not included in Parts B and C.

N/C means not calculated



TABLE B

PERFORMANCE GROUPINGS OF ENDOWMENT POOLS AND INDEXES FOR VARIOUS PERIODS ENDING JUNE 30, 1974

Group	10 Year	5 Year	3 Year	1 Year
All Institutions	3.03	1.15	-1.37	-11.43
Total Return Investment Objective	N/C	1.04	-1.98	-12.68
Balanced or Income Investment Objective	N/C	1.37	79	-10.56
Market Size Over \$50 Million	N/C	1.42	-1.55	-12.48
Market Size \$10 - \$50 Million	N/C	1.00	-1.32	-12.46
Market Size Under \$10 Million	N/C	1.31	-1.09	-10.20
Dow Jones	3.37	2.15	.23	- 6.10
S & P 425	4.35	1.23	-1.11	-13.74
S & P 500	3.85	. 80	-1.74	-14.49

NOTE: N/C means not calculated

1974 NACUBO COMPARATIVE PERFORMANCE STUDY

Average Total Return for Ten-, Five-, Three- and One-Year Periods Ending June 30, 1974

All Institutions Reporting (150 pools)

TEN YEARS ENDING JUNE 30, 1974

RANK CODE NAME TOTAL RETURN RANK CODE NAME TOTAL RETURN 1 c18 7.63 % 39 c27 2.91 % 2 e35 7.17 40 e41 2.81 3 c62 5.68 41 c42 2.78 4 c5 5.45 42 c50 2.77 5 e5 5.43 43 c21 2.67 6 e11 5.17 44 c76 2.66 7 c65 4.79 45 e8 2.59 8 c10 4.72 46 c6 2.58 9 e51 4.46 47 e27 2.56 10 e18 4.59 48 c41 2.54 11 c55 4.47 49 e34 2.52 12 e42 4.38 50 c46 2.51 13 sp425 4.35 51 e44 2.39			AVERAGE			•	AVERAGE	
1 c18 7.63 % 39 c27 2.91 % 2 e35 7.17 40 e41 2.81 3 c62 5.68 41 c42 2.78 4 c5 5.45 42 c50 2.77 5 e5 5.43 43 c21 2.67 6 e11 5.17 44 c76 2.66 7 c65 4.79 45 e8 2.59 8 c10 4.72 46 c6 2.58 9 e51 4.66 47 e27 2.56 10 e18 4.59 48 c41 2.54 11 c55 4.47 49 e34 2.52 12 e42 4.38 50 c46 2.51 13 sp425 4.35 51 e44 2.39 14 e17 4.26 52 e39 2.34 15 e61 4.17 53 e71 2.34 16 c9	TO A BITTE	CODE NAME			D ANTE	CODE NAME		TRN
2 e35 7.17 40 e41 2.81 3 c62 5.68 41 c42 2.78 4 c5 5.45 42 c50 2.77 5 e5 5.43 43 c21 2.67 6 e11 5.17 44 c76 2.66 7 c65 4.79 45 e8 2.59 8 c10 4.72 46 c6 2.58 9 e51 4.66 47 e27 2.56 10 e18 4.59 48 c41 2.54 11 c55 4.47 49 e34 2.52 12 e42 4.38 50 c46 2.51 13 sp425 4.35 51 e44 2.39 14 e17 4.26 52 e39 2.34 15 e61 4.17 53 e71 2.34 16 c9 4.01 54 e75 2.33 17 c66 3.97 55 e59 2.32 18 e6 3.89 56 e36 2.29 19 c2 3.89 57 c49 2.26 20 sp500 3.85 58 e73 2.18 21 e38 3.85 59 c15 2.12 22 c31 3.75 60 e21 2.11 23 e15 3.74 61 e1 2.09 24 c3 3.64 62 e2 1.98 25 c26 3.62 63 c14 1.85 26 e20 3.58 64 c17 1.78 30 d-jones 3.37 68 e19 1.44 31 e3 3.34 69 c57 1.4 32 c64 3.27 70 c68 1.33 33 c19 3.25 71 e12 1.32 34 c29 3.11 73 e10 1.16 36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e49 0.27 38 e28 2.94 76 e69 0.18	RANK	CODE NAME	TOTAL KETUKN		RAINE	CODE MARIE	TOTAL KELL	0141
2 e35 7.17 40 e41 2.81 3 c62 5.68 41 c42 2.78 4 c5 5.45 42 c50 2.77 5 e5 5.43 43 c21 2.67 6 e11 5.17 44 c76 2.66 7 c65 4.79 45 e8 2.59 8 c10 4.72 46 c6 2.58 9 e51 4.66 47 e27 2.56 10 e18 4.59 48 c41 2.54 11 c55 4.47 49 e34 2.52 12 e42 4.38 50 c46 2.51 13 sp425 4.35 51 e44 2.39 14 e17 4.26 52 e39 2.34 15 e61 4.17 53 e71 2.34 16 c9 4.01 54 e75 2.33 17 c66 3.97 55 e59 2.32 18 e6 3.89 56 e36 2.29 19 c2 3.89 57 c49 2.26 20 sp500 3.85 58 e73 2.18 21 e38 3.85 59 c15 2.12 22 c31 3.75 60 e21 2.11 23 e15 3.74 61 e1 2.09 24 c3 3.64 62 e2 1.98 25 c26 3.62 63 c14 1.85 26 e20 3.58 64 c17 1.78 30 d-jones 3.37 68 e19 1.44 31 e3 3.34 69 c57 1.4 32 c64 3.27 70 c68 1.33 33 c19 3.25 71 e12 1.32 34 c29 3.11 73 e10 1.16 36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18	1	c18	7.63 %		39	c27	2.91 %	١
3								•
4 c5 5.45 42 c50 2.77 5 e5 5.43 43 c21 2.67 6 e11 5.17 44 c76 2.66 7 c65 4.79 45 e8 2.59 8 c10 4.72 46 c6 2.58 9 e51 4.66 47 e27 2.56 10 e18 4.59 48 c41 2.54 11 c55 4.47 49 e34 2.52 12 e42 4.38 50 c46 2.51 13 sp425 4.35 51 e44 2.39 14 e17 4.26 52 e39 2.34 15 c61 4.17 53 e71 2.34 16 c9 4.01 54 e75 2.33 17 c66 3.97 55 e59 2.32 18 e6 3.89 56 e36 2.29 19 c2 3.89 57 c49 2.26 20 sp500 3.85 58 e73 2.18 21 e38 3.85 59 c15 2.12 22 c31 3.75 60 e21 2.11 23 e15 3.74 61 e1 2.09 24 c3 3.64 62 e2 1.98 25 c26 3.62 63 c14 1.85 26 e20 3.58 64 c17 1.78 27 c28 3.44 65 e65 1.68 28 c78 3.42 66 e14 1.59 29 c47 3.39 67 e62 1.48 30 d-jones 3.37 68 e19 1.44 31 e3 3.34 69 c57 1.4 32 c64 3.27 70 c68 1.33 33 c19 3.25 71 e12 1.32 34 c29 3.13 72 e4 1.16 35 e72 3.11 73 e10 1.16 36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18	3							
5 e5 5.43 43 c21 2.67 6 e11 5.17 44 c76 2.66 7 c65 4.79 45 e8 2.59 8 c10 4.72 46 c6 2.58 9 e51 4.66 47 e27 2.56 10 e18 4.59 48 c41 2.54 11 c55 4.47 49 e34 2.52 12 e42 4.38 50 c46 2.51 13 sp425 4.35 51 e44 2.39 14 e17 4.26 52 e39 2.34 15 e61 4.17 53 e71 2.34 16 c9 4.01 54 e75 2.33 17 c66 3.97 55 e59 2.32 18 e6 3.89 56 e36 2.29 19 c2 3.89 56 e36 2.29 19 c2 3.89 57 c49 2.26 20 sp500 3.85 58 e73 2.18 21 e38 3.85 59 c15 2.12 22 c31 3.75 60 e21 2.11 23 e15 3.74 61 e1 2.09 24 c3 3.64 62 e2 1.98 25 c26 3.62 63 c44 1.85 26 e20 3.58 64 c17 1.78 27 c28 3.44 65 e65 1.68 28 c78 3.42 66 e14 1.59 29 c47 3.39 67 e62 1.48 30 d-jones 3.37 68 e19 1.44 31 e3 3.34 69 c57 1.4 32 c64 3.27 70 c68 1.33 33 c19 3.25 71 e12 1.32 34 c29 3.13 72 e4 1.16 35 e72 3.11 73 e10 1.16 36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18				•				
6 ell 5.17								
7	6							
8 c10 4.72 46 c6 2.58 9 e51 4.66 47 e27 2.56 10 e18 4.59 48 c41 2.54 11 c55 4.47 49 e34 2.52 12 e42 4.38 50 c46 2.51 13 sp425 4.35 51 e44 2.39 14 e17 4.26 52 e39 2.34 15 e61 4.17 53 e71 2.34 16 c9 4.01 54 e75 2.33 17 c66 3.97 55 e59 2.32 18 e6 3.89 56 e36 2.29 19 c2 3.89 57 c49 2.26 20 sp500 3.85 58 e73 2.18 21 e38 3.85 59 c15 2.12 22 c31 3.75 60 e21 2.11 23 e15 3.74 61 e1 2.09 24 c3 3.64 62 e2 1.98 25 c26 3.62 63 c14 1.85 26 e20 3.58 64 c17 1.78 27 c28 3.44 65 e65 1.68 28 c78 3.42 66 e14 1.59 29 c47 3.39 67 e62 1.48 30 d-jones 3.37 68 e19 1.44 31 e3 3.34 69 c57 1.4 32 c64 3.27 70 c68 1.33 33 c19 3.25 71 e12 1.32 34 c29 3.13 72 e4 1.16 35 e72 3.11 73 e10 1.16 36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18								
9 e51 4.66 47 e27 2.56 10 e18 4.59 48 c41 2.54 11 c55 4.47 49 e34 2.52 12 e42 4.38 50 c46 2.51 13 sp425 4.35 51 e44 2.39 14 e17 4.26 52 e39 2.34 15 e61 4.17 53 e71 2.34 16 c9 4.01 54 e75 2.33 17 c66 3.97 55 e59 2.32 18 e6 3.89 56 e36 2.29 19 c2 3.89 57 c49 2.26 20 sp500 3.85 58 e73 2.18 21 e38 3.85 59 c15 2.12 22 c31 3.75 60 e21 2.11 23 e15 3.74 61 e1 2.09 24 c3 3.64 62 e2 1.98 25 c26 3.62 63 c14 1.85 26 e20 3.58 64 c17 1.78 27 c28 3.44 65 e65 1.68 28 c78 3.42 66 e14 1.59 29 c47 3.39 67 e62 1.48 30 d-jones 3.37 68 e19 1.44 31 e3 3.34 69 c57 1.4 32 c64 3.27 70 c68 1.33 33 c19 3.25 71 e12 1.32 34 c29 3.13 72 e4 1.16 35 e72 3.11 73 e10 1.16 36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18								
10 e18 4.59 48 c41 2.54 11 c55 4.47 49 e34 2.52 12 e42 4.38 50 c46 2.51 13 sp425 4.35 51 e44 2.39 14 e17 4.26 52 e39 2.34 15 e61 4.17 53 e71 2.34 16 c9 4.01 54 e75 2.33 17 c66 3.97 55 e59 2.32 18 e6 3.89 56 e36 2.29 19 c2 3.89 57 c49 2.26 20 sp500 3.85 58 e73 2.18 21 e38 3.85 59 c15 2.12 22 c31 3.75 60 e21 2.11 23 e15 3.74 61 e1 2.09 24 c3 3.64 62 e2 1.98 25 c26 3.62 63 c14 1.85 26 e20 3.58 64 c17 1.78 27 c28 3.44 65 e65 1.68 28 c78 3.42 66 e14 1.59 29 c47 3.39 67 e62 1.48 30 d-jones 3.37 68 e19 1.44 31 e3 3.34 69 c57 1.4 32 c64 3.27 70 c68 1.33 33 c19 3.25 71 e12 1.32 34 c29 3.13 72 e4 1.16 35 e72 3.11 73 e10 1.16 36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18								
11 c55 4.47 49 e34 2.52 12 e42 4.38 50 c46 2.51 13 sp425 4.35 51 e44 2.39 14 e17 4.26 52 e39 2.34 15 e61 4.17 53 e71 2.34 16 c9 4.01 54 e75 2.33 17 c66 3.97 55 e59 2.32 18 e6 3.89 56 e36 2.29 19 c2 3.89 57 c49 2.26 20 sp500 3.85 58 e73 2.18 21 e38 3.85 59 c15 2.12 22 c31 3.75 60 e21 2.11 23 e15 3.74 61 e1 2.09 24 c3 3.64 62 e2 1.98 25 c26 3.62 63 c14 1.85 26 e20 3.58 64 c17 1.78 27 c28 3.44 65 e65 1.68 28 c78 3.42 66 e14 1.59 29 c47 3.39 67 e62 1.48 30 d-jones 3.37 68 e19 1.44 31 e3 3.34 69 c57 1.4 32 c64 3.27 70 c68 1.33 33 c19 3.25 71 e12 1.32 34 c29 3.13 72 e4 1.16 35 e72 3.11 73 e10 1.16 36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18								
12 e42 4.38 50 c46 2.51 13 sp425 4.35 51 e44 2.39 14 e17 4.26 52 e39 2.34 15 e61 4.17 53 e71 2.34 16 c9 4.01 54 e75 2.33 17 c66 3.97 55 e59 2.32 18 e6 3.89 56 e36 2.29 19 c2 3.89 57 c49 2.26 20 sp500 3.85 58 e73 2.18 21 e38 3.85 59 c15 2.12 22 c31 3.75 60 e21 2.11 23 e15 3.74 61 e1 2.09 24 c3 3.64 62 e2 1.98 25 c26 3.62 63 c14 1.85 26 e20 3.58 64 c17 1.78 27 c28 3.44 65 e65 1.68 28 c78 3.42 66 e14 1.59 29 c47 3.39 67 e62 1.48 30 d-jones 3.37 68 e19 1.44 31 e3 3.34 69 c57 1.4 32 c64 3.27 70 c68 1.33 33 c19 3.25 71 e12 1.32 34 c29 3.13 72 e4 1.16 35 e72 3.11 73 e10 1.16 36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18								
13								
14 e17 4.26 52 e39 2.34 15 e61 4.17 53 e71 2.34 16 c9 4.01 54 e75 2.33 17 c66 3.97 55 e59 2.32 18 e6 3.89 56 e36 2.29 19 c2 3.89 57 c49 2.26 20 sp500 3.85 58 e73 2.18 21 e38 3.85 59 c15 2.12 22 c31 3.75 60 e21 2.11 23 e15 3.74 61 e1 2.09 24 c3 3.64 62 e2 1.98 25 c26 3.62 63 c14 1.85 26 e20 3.58 64 c17 1.78 27 c28 3.44 65 e65 1.68 28 c78 3.42 66 e14 1.59 29 c47 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
15								
16 c9 4.01 54 e75 2.33 17 c66 3.97 55 e59 2.32 18 e6 3.89 56 e36 2.29 19 c2 3.89 57 c49 2.26 20 sp500 3.85 58 e73 2.18 21 e38 3.85 59 c15 2.12 22 c31 3.75 60 e21 2.11 23 e15 3.74 61 e1 2.09 24 c3 3.64 62 e2 1.98 25 c26 3.62 63 c14 1.85 26 e20 3.58 64 c17 1.78 27 c28 3.44 65 e65 1.68 28 c78 3.42 66 e14 1.59 29 c47 3.39 67 e62 1.48 30 d-jones 3.37 68 e19 1.44 31 e3								
17 c66 3.97 55 e59 2.32 18 e6 3.89 56 e36 2.29 19 c2 3.89 57 c49 2.26 20 sp500 3.85 58 e73 2.18 21 e38 3.85 59 c15 2.12 22 c31 3.75 60 e21 2.11 23 e15 3.74 61 e1 2.09 24 c3 3.64 62 e2 1.98 25 c26 3.62 63 c14 1.85 26 e20 3.58 64 c17 1.78 27 c28 3.44 65 e65 1.68 28 c78 3.42 66 e14 1.59 29 c47 3.39 67 e62 1.48 30 d-jones 3.37 68 e19 1.44 31 e3 3.34 69 c57 1.4 32 c64								
18								15
19								
20 sp500 3.85 58 e73 2.18 21 e38 3.85 59 c15 2.12 22 c31 3.75 60 e21 2.11 23 e15 3.74 61 e1 2.09 24 c3 3.64 62 e2 1.98 25 c26 3.62 63 c14 1.85 26 e20 3.58 64 c17 1.78 27 c28 3.44 65 e65 1.68 28 c78 3.42 66 e14 1.59 29 c47 3.39 67 e62 1.48 30 d-jones 3.37 68 e19 1.44 31 e3 3.34 69 c57 1.4 32 c64 3.27 70 c68 1.33 33 c19 3.25 71 e12 1.32 34 c29 3.13 72 e4 1.16 35 e72 3.11 73 e10 1.16 36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18								
21 e38 3.85 59 c15 2.12 22 c31 3.75 60 e21 2.11 23 e15 3.74 61 e1 2.09 24 c3 3.64 62 e2 1.98 25 c26 3.62 63 c14 1.85 26 e20 3.58 64 c17 1.78 27 c28 3.44 65 e65 1.68 28 c78 3.42 66 e14 1.59 29 c47 3.39 67 e62 1.48 30 d-jones 3.37 68 e19 1.44 31 e3 3.34 69 c57 1.4 32 c64 3.27 70 c68 1.33 33 c19 3.25 71 e12 1.32 34 c29 3.13 72 e4 1.16 35 e72 3.11 73 e10 1.16 36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18								
22								
23 e15 3.74 61 e1 2.09 24 c3 3.64 62 e2 1.98 25 c26 3.62 63 c14 1.85 26 e20 3.58 64 c17 1.78 27 c28 3.44 65 e65 1.68 28 c78 3.42 66 e14 1.59 29 c47 3.39 67 e62 1.48 30 d-jones 3.37 68 e19 1.44 31 e3 3.34 69 c57 1.4 32 c64 3.27 70 c68 1.33 33 c19 3.25 71 e12 1.32 34 c29 3.13 72 e4 1.16 35 e72 3.11 73 e10 1.16 36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18							2.11	
24 c3 3.64 62 e2 1.98 25 c26 3.62 63 c14 1.85 26 e20 3.58 64 c17 1.78 27 c28 3.44 65 e65 1.68 28 c78 3.42 66 e14 1.59 29 c47 3.39 67 e62 1.48 30 d-jones 3.37 68 e19 1.44 31 e3 3.34 69 c57 1.4 32 c64 3.27 70 c68 1.33 33 c19 3.25 71 e12 1.32 34 c29 3.13 72 e4 1.16 35 e72 3.11 73 e10 1.16 36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18								
25								
26 e20 3.58 64 c17 1.78 27 c28 3.44 65 e65 1.68 28 c78 3.42 66 e14 1.59 29 c47 3.39 67 e62 1.48 30 d-jones 3.37 68 e19 1.44 31 e3 3.34 69 c57 1.4 32 c64 3.27 70 c68 1.33 33 c19 3.25 71 e12 1.32 34 c29 3.13 72 e4 1.16 35 e72 3.11 73 e10 1.16 36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18								
27								•
28							1.68	:
29 c47 3.39 67 e62 1.48 30 d-jones 3.37 68 e19 1.44 31 e3 3.34 69 c57 1.4 32 c64 3.27 70 c68 1.33 33 c19 3.25 71 e12 1.32 34 c29 3.13 72 e4 1.16 35 e72 3.11 73 e10 1.16 36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18							1.59	
30 d-jones 3.37 68 e19 1.44 31 e3 3.34 69 c57 1.4 32 c64 3.27 70 c68 1.33 33 c19 3.25 71 e12 1.32 34 c29 3.13 72 e4 1.16 35 e72 3.11 73 e10 1.16 36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18							1.48	
31 e3 3.34 69 c57 1.4 32 c64 3.27 70 c68 1.33 33 c19 3.25 71 e12 1.32 34 c29 3.13 72 e4 1.16 35 e72 3.11 73 e10 1.16 36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18							1.44	
32 c64 3.27 70 c68 1.33 33 c19 3.25 71 e12 1.32 34 c29 3.13 72 e4 1.16 35 e72 3.11 73 e10 1.16 36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18				,			1.4	
33 c19 3.25 71 e12 1.32 34 c29 3.13 72 e4 1.16 35 e72 3.11 73 e10 1.16 36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18							1.33	14
34 c29 3.13 72 e4 1.16 35 e72 3.11 73 e10 1.16 36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18								
35 e72 3.11 73 e10 1.16 36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18					72			
36 e45 2.99 74 c30 0.62 37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18					73			
37 c32 2.98 75 e43 0.27 38 e28 2.94 76 e69 0.18								
38 e28 2.94 76 e69 0.18								
	50							



AVERAGE TOTAL RETURN

FIVE YEARS ENDING JUNE 30, 1974

		-		+		
		AVERAGE	•		AVERAGE	! !
RANK	CODE NAME	TOTAL RETURN	RANK	CODE NAME	TOTAL RET	URN
	<u> </u>					
1	c62	9.37 %	48	c56	1.84 %	
2	c23	7.14	49	e38	1.77	
3	c13	5.92	50	c55	1.77	
4	e23	5.57	51	c68	1.77	
5	c72	4.49	52	c14		
6					1.61	_
	c39	4.45	53	c26	1.61	
. 7	c84.	4.08	54	c78	1.53	
8	→ e51	3.87	55	c42	1.44	
9	e5	3.72	56	c47	1.43	
10	e63	3.69	57	e28	1.38	
11	c10	3.64	58	c76	1.34	
12	c65	3.62	59	с6	1.34	
13	e3	3.56	60	c41	1.32	
14	e47	3.55	61	e20	1.29	
15	c60	3.46	62	c29	1.26	
16	e17	3.44	63	sp425	1.23	÷
17	. c18	3.41	64	c46	1.2	
18	e6	3.38	65	e73	1.17	
19	c28	3.29	. 66	e10	1.09	
20	e16	3.28	67	e53	1.02	
21	c20	3.15	68	,c24	0.85	
22			. 69			4
	c64	3.14		c51	0.84	
23	" c66	3	70	sp500	0.8	
24	e22	2.98	71	e39	0.74	
25	c50	2.93	72 	e71	0.73	
26	c 9	2.81	73	e7	0.68	
27	· c77	2.79	74	e30	0.67	
28	e?7	2.71	75	e34	0.64	
29	_ c86	2.71	[*] 76	. e5	0.6	
30 -	e15	2.67	77	e72	0.57	
31	c40	2.64	78	e48	0.4	
32	e42	2.64	79	e8	0.38	
33	e35	2.56	80	e81	0.33	
34	232	2.55	81	e65	0.31	
35	c3	2.53	82	cl1	0.18	
36	e18	2.48	83	c21	0.16	
37	c2	2.45	84	e32	0.05	
38	c19	2.25	85	c12	0.04	
39	ℓ e13	2.21	, 86	c81	0.02	
40	e44	2.2	. 87	e78	-0.02	
41			88	c63	-0.07	
41 42	d-jones c49	2.15	89	e59	-0.07	-
		2.14	00		-0.16	
43	c31	2.12		e2		
44	ell		91	e41	-0.17	~
45	e56 _.	2.05	9°2<	e45	-0.32	
46	e61	2.02	93	c30	-0.36	
47	c27	1.98	94	el	-0.41	
			4			

AVERAGE TOTAL RETURN

FIVE YEARS ENDING JUNE 30, 1974 (CONTINUED)

RANK	CODE NAME	AVERAGE TOTAL RETURN	<u>R</u>	ANK	CODE NAME	AVERAGE TOTAL RETURN
95	c17	-0.49 %	1	.08	c48	-1.39 %
96	e49	-0.54	1	.09	c7	-1.51
97	e40	-0.61	1	.10	e55	-1.8 5
98	c57·	-0.63	1	.11	c15	-1.97
99	e43	-0.86	. 1	.12	e12	-2.17
100	e14	-0.9	. 1	.13	c82	-2.48
101	e19	-0.94	1	.14	e75	-2.71
102	e36	-1.05	, 1	1.15	c58	-2.94
103	e4	-1.19	. 1	116	e62	-3.92
104	e68	-1.31	, 1	L17	e69	-4.22
105	e21	-1.31]	L18	e29	-4.24
106	c80	-1.35]	19	c44	-4.44
107	e26	-1.35	آ ۔	L20	e80	-6.49

AVERAGE ROR 1.15

THREE YEARS ENDING JUNE 30, 1974

RANK	CODE NAME	AVERAGE TOTAL RETURN		RANK	CODE NAME	AVERAGE TOTAL RETURN
1	c65	11.65 %		27	c69	1.45 %
2	c23	7.31	s'	28	c24	1.42
3	c62	5.52		29	e70	1.35
. 4	c33	5.23		30	e13	1.29
5	c81	4.57		31	c66	1.19
6	c5	4.35		32	c31	1.19
7	c40	3.65		33	e42	1.07
8	e51	3.42		34	e63	1.07
9	c72	3.35		35	c64 ⁻¹	1.05
10 ·	c73	3.15		36	e37	1.03
11	c13	2.85		37	c32	1.02
12	c54	2.73		38	c84	0.98
13	c70	2.72		39	c18	0.94
14	e6	2.54	,	40	e56	0.91
15	c10	2.51		41	e18	0.9
16	c2	2.3		42	c71	0.62
17	c20	2.03		43	c50	0.55
18	e15	1.99		44	с9	0.42
19	e17	1.9		45	e35	0.39
20	c60	1.73		46	e16	0.32
21	c39	1.7		47	с3	0.26
22	c86	1.66		48	d-jones	
23	e47	1.65		49	e20	0.2
24	e3 -	1.6		50	c26	0.15
25	- c28	1.56	1	51	c77	0.14
26	e22	1.55		52	e44	-0.13

AVERAGE TOTAL RETURN

THREE YEARS ENDING JUNE 30, 1974 (CONTINUED)

		AVERAGE		÷		AVERAGE
RANK	CODE NAME	TOTAL RETURN	•	RANK	CODE NAME	TOTAL RETURN
53	c34	-0.15 %		98	e65	-2. 77 %
54	e33	-0.21		99	° c56	-2.86
55	e23	√ 0.28 ^		100	e34	-2.87
56	e7	-0.37		101	c30	-2.96
57	e48	-0.39	,	102	c16	-3.18
58	c46	-0.4		103	e2	-3.18
59	e73	-0.73		104	c67	-3.3
60 .	e57	-0.77		105	e81	-3.39
61	c19	-0.8	1 .	106	e25	-3.48
62	c76	-0.6		107	c85	-3.48 -3.51
63	e71	-0.89		108	c41	
64	e38 .	-0.89 -1		109	e40	-3.55
65	c68	-1.01				-3.69
66	e27	-1.02		110	e59	-3.73 2.70
67	e27			111	c12	-3.79
68		-1.02		112	e78	-4
69	c14 e52	-1.03 -1.04		113	e32	-4.03
		-1.04	.*	114	e9	-4.11
70	c49	-1.04		115	e36	-4.12
71	sp425	-1.11		116	e68	-4.18
72	c6	-1.23		117	e58	-4.26
73	e30	-1.31	4	118	e41	-4.41
74	c59	-1.4		119	e8	-4.42
75	c42	-1.5		120	c80 🦟	-4.43
76	e77	-1.54		121	e19	-4.61
77	c29	-1.6		122	e43	-4.83
78 78	e61	I.64	•	123	e24	-4.84
79	e53	-1.64		124	e12	-4.94
80	e10	-1.72		125	el .	- 5 .
81	sp500	-1.74		126	e62	-5.5
82	e39	-1.75		127	e26	-5.61
83	ć47	-1.75		128	· c63	-6.05
84	e4	-1.8		129	c7	-6.06
85	c55	-1.9	•	130	e75	-6.16
86	c17	-1.9		1`31	e21	-6.58
87	c11	-1.99		132	c15	-6.68
88	. c51	-2		133	c48	-6.71
89	c27	-2.25		134	e5	-6.88
90	ell	-2.32		135	e64	-7.45
91	c78	-2.37		136	e55	-7.9 4
92	e14	-2.41		137	c58	-8.54
93	c21	-2.41		138	e29	-8.63
94	e49	-2.46		139	c82	-8.76
95	e72	-2.62		140	e69	-8.86
96	c57	-2.74		141	c44	-9.85
97	e45	-2.77		142	e80	-10.9

AVERAGE ROR -1.37

AVERAGE TOTAL RETURN ONE YEAR ENDING JUNE 30, 1974

			•		•	
v .		AVERAGE				AVERAGE
RANK	CODE NAME	TOTAL RETURN		RANK	CODE NAME	TOTAL RETURN
1	c62	4.19 %		4 8	c45	- 8.61 %
1 2	c40	3.94		49	e70	- 8.64
3	c35	3.81		50	c79	- 8.64
4	c69	3.67		51	e62	- 8.98
	c59			52		- 9.09
5		0.63			e52	
. 6	c86	-0.82		53	e31	- 9.13
7	c5	-0.87		54	e20	- 9.13
8	c23	-0.94		55	°c51	- 9.14
9	c33 .	-1.29		56	c31	- 9.18
10	c13	-2.38		57	• e7	- 9,2
11	c73	-2.49		58	e28	- 9.53
12	c44	-2.56		59	e3	- 9.85
13	e37	-2.71		60	c47	- 9.88
14	c10	-2.81		61	e40	- 9.98
15	c65	-3.07		62	e24	-10.01
				63	c77	-10.14
16	e61	-3.51				
17	e59	-3.68		64	c56	-10.24
18	e16	-4.06		65	e41	-10.25
19	c72	-4.14		66	c6	-10.25
20	e79	-4.73		67	e58	-10.27
21	c66	-5.01	•	68	c19	-10.58
22	e51	-5.35		69	c3	-10.61
23	c70	-5.49		70	e8	-10.64
24	e36	-5.56		71	c34	-10.82
25	e48	-5.58		72	e77	-10.83
26	c54	-5.72	1	73	c80	-10.96
27	c29	-6.07		74	e65	-11.02
28	d-jones	-		75	e47	-11.14
29				76	c60	-11.29
	c68	-6.3		70 77	c17	-11.35
30	e82	-6.41				
31	c20	-6.45		78	c78	-11.5
32	e13	-6.66		79	c30	-11.52
33	e76	-6.8		80	c14	-11.65
34	c18	-7.07		81	c76	-11.72
35	e4	- 7.08		82	e56	-11.73
36	e15	-7.24		83	c26	-11.77
37	c71	-7.4	•	84	e42	-11.89
38	e22	-7.55		85	е6	-12.01
39	c9	-8.07		86	e73	-12.13
40	e45	-8.19		. 87	c84	-12.26
41	c64	-8.2		88	e72	-12.28
				89	e30	-12.39
42	e46	-8.29		90		-12.39 -12.47
43	c28	-8.41			e57	
44	c2	-8.43		91	e53	-12.48
45	e33	-8.46		92	e38	-12.68
46	c32	-8.48		93	c57	-12.83
47	c24	-8.58		94	e12	-12.85
		•				

AVERAGE TOTAL RETURN

ONE YEAR ENDING JUNE 30, 1974 (CONTINUED)

	•	AVERAGE			AVERAGE
RANK	CODE NAME	TOTAL RETURN	RANK	CODE NAME	TOTAL RETURN
0.5		10.07.4	301		35 7 %
95	c 16	-12.87 %	124	e27	-15.7 %
96	· e83	-12.9	125	c41	-15.86
97	. е78	-13	126	c55	-16.2
98	e68	-13.03	127	c 21	-16.42
99	e43	-13. 05	128	e 8 1	-16.61
100	e19	-13.09	129	c63	-16.71
101	e 17	-13.2	130	e49	-16.79
102	_e18	-13.23	131	e44	-17.17
103	c50	-13.31	132	e10	-1 7.51
104	e71	-13.66	1 3 3	$_{j}$ ell	-17.69
105	sp425	-13.74	134	el el	-17.73
106	el4	-13.75	135	e63	-17.86
107	e29	-13.77	136	e55	-18.16
108	c46	-14.03	137	c85	-19.06
109	. c15	-14.04	138	e2	-19.46
110	e84	-14.04	139 /	e80	-19.47
111	e25	-14.13	140	c48	-19.7
112	c11	-14.48	141	е9	-20.27
113	sp500	-14.49	<i>i</i> 142	e74	-20.29
114	e39	-14.56	143	e26	-21.15
115	e75	-14.69	144	e35.	-22.58
116	c 39	-14.69	· 1/45 -	e5	-22.8
117	c4 9	-14.7	146	c 81	-24.12
118	c42	-14.96	147	c82	-24.77
119	e34	-15.05	/ 148 -	c12	-24.82
120	e23	-15.12	[′] 149	e64	-25.03
. 121	e32	-15.18	150	с7	-27.17
122	c27	-15.18	151	·e 2 1	-27.27
123	c67	-15.43	/ 152	e69	-28.23
			, 153	. c58	-36.83
			,		

AVERAGE ROR -11.43

1974 NACUBO COMPARATIVE PERFORMANCE STUDY

Average Total Return of Institutions with

Total Return Investment Objective for Five-, Three- and One-Year Periods Ending June 30, 1974

FIVE YEARS ENDING JUNE 30, 1974 (50 pools)

		AVERAGE	•		AVERAGE
RANK	CODE NAME	TOTAL RETURN	RANK	CODE NAME	TOTAL RETURN
1	c23	7.14 %	26	sp425	1.23 %
2	c13	5.92	27	sp500	0.8
3	c 3 9	4.45	28	e39	0.74
4	e63	3.69	29	e71	0.73
5	e3	3.56	30	е7	0.68
6	c60	3.46	31	e30	0.67
7	c18	3.41	32	e5	0.6
8	е6	3.38	33	c21	0.16
9	e16	3.28	34	c12	0.04
10	c20	3.15	35	⁻ c63	-0.07
11	c50	2.93	36 *	el ·	-0.41
12	c77	2.79	37	e40	-0.61
13	e27	2.71	38	c57	-0.63
14	c86	2.71	39 .	e19	-0. 94
15	e42	2.64	40	e36	-1.05
16	e35	2.56	41	e68	-1.31
17	e18	2.48	42	e26	-1.35
18	c 2	2.45	43	c48	-1.39
19	c19	2.25	44	с7	-1.51
20	d-jones	2.15	45	c15	-1.97
21	c 31	2.12	46	e75	-2.71
22	e11	2.06	47	°c58	-2.94
23	c56	1.84	48	e62	-3.92
24	c42	1.44	49	e69	-4.22
25	c76	1.34	50	c44	-4.44

AVERAGE ROR 1.04

.

TOTAL RETURN INVESTMENT OBJECTIVE THREE YEARS ENDING JUNE 30, 1974 (59 pools)

RANK	CODE NAME	AVERAGE TOTAL RETURN		P^NK	CODE NAME	AVERAGE TOTAL RETURN
101110	OODD MIND	TO ITED TEST DATE		- ,	CODE MILLE	TO THE TOTAL
1	· c23	7.31 %		30	c59	-1.4 %
2	c13	2.85		31	c42	-1.5
3 .	e6	2.54	•	32	sp500	-1.74
4	c2	2.3		33	e39	-1. 75
5	c20	2.03		34	e11	-2.32
5 6	c60	1.73	•	35	c21	-2.41
7	c39	1.7		36	c57	-2.74
8	c86	1.66		37 ~	c56	-2.86
9	e3	1.6	•	38	c16	-3.18
10	c69	1.45		39	e25	-3.48
11	c31	1.19		40	e40	-3.69
12	e63	1.07	-	41	c12	-3. 79
13	e42	1.07		42	e9	-4.11
14	c18	0.94		43	e36	-4.12
15	e18	0.9		44	e68	-4.18
16	c50	0.55		45	e19	-4.61
17	e35	0.39		46	e24	-4. 84 ·
. 18	e16	0.32		47	el	- 5
19	d-jones	0.23		48	e62	- 5.5
20	c77	0.14		49	e26	-5.61
21	c34	-0.15		50	c63	-6.05
22	→ e33	-0.21		51	с7	-6.06
23	e7 ·	-0.37		52	e75	-6.16
24	c19	-0.8		53	·c15	-6.68
25	c76	-0.8		54	c48	-6.71
26	e71	-0.89		55	e5	-6.88
27	e27	-1.02	j u	56	e64	-7.45
28	sp425	-1.11		57	c58	-8.54
29	e30	-1.31	-	58	e69 '	-8.8 6
			1	59	c44	-9.85

AVERAGE ROR -1.98

TOTAL RETURN INVESTMENT OBJECTIVE ONE YEAR ENDING JUNE 30, 1974 (60 pools)

RANK	CODE NAME	AVERAGE TOTAL RETURN	RANK	CODE NAME	AVERAGE TOTAL RETURN
1	c35	3.81 %	31	c16	-12.87 %
2 3	c69	3.67	32	e68	-13.03
	c59	0.63	33	e19	-13.09
4	c86	0.82	34	e18	-13.23
5	c23	- 0.94	35	c50	-13.31
6	c_13	- 2.38	36	e71	-13.66
7 8	c44	- 2.56	37	sp425	-13.74
	e16	- 4.06	38	c15	-14.04
9	e36	- 5.56	39	e25	-14.13
10	d-jones	- 6.1	40	sp 500	-14.49
11	c20	- 6.45	41	e39.	-14.56
12	c18 `	- 7.07	. 42	e75	-14.69
13	c2	- 8.43	43	c39	-14.69
14	e33	- 8.46	44	c42	-14.96
15	e62	- 8.98	45	e27	-15.7
16	c31	- 9.18	46	c21	-16.42
17	e7	- 9.2	47	c63	-16.71
18	e3	- 9.85	48	ell	-17.69
19	e40	- 9.98	49	el	-17.73
20	e24	-10.01	50	e63	-17.86
21	c77	-10.14	51	c48	-19. 7
22	c56	-10.24	52.	e9	-20,27
23	c19	-10.58	53	e26 .	-21. 15
24	c34	-10.82	54	e35	-22.58 .
25	c60	-11.29	₃ 55 ₃	е5	-22.8
- 26	c76	-11.72	56	c12	-24.82
27	e42	-11.89	57	e64	-25.03
28	е6	-12.01	58	с7	-27.17
29	e30	-12.39	59	e69 '	-28.23
30	c57	-12.83	60	c58	-36.83

AVERAGE ROR -12.68

1974 NACUBO COMPARATIVE PERFORMANCE STUDY

Average Total Return of Institutions with Balanced or Income Oriented Investment Objective

For Five-, Three- and One-Year Periods Ending June 30, 1974

FIVE YEARS ENDING JUNE 30, 1974 (70 pools)

				•	
		AVERAGE			AVERAGE
RANK	CODE NAME	TOTAL RETURN	RANK	CODE NAME	TOTAL RETURN
1	c62	9.37 %	36	c41	1.32 %
	e23	5.57	37	e20	1.29
3	c72	4.49	38	c29	1.26
4	c84	4.08	39	sp425	1.23
5	e51	3.87	40	£ c46	1.2
- 6	c5	3.72	41	e73	1.17
7	c10	3.64	42	e10	1.09
8	c65	3.62	43	e53	1.02
9	e47	3.55	44	c24	0.85
10	e17	3.44	45	2c51	0.84
11	c28	3.29	46	sp500	0.8
12	c64	3.14	47	e34	0.64
13	c66	´ 3	48	e72	0.57
14	e22	2.98	49	e48	0.4
15	c9	2.81	50	e8 -	0.38
16	e15	2.67	51	e81	0.33
17	c40	2.64	52	e65	0.31
18	c32	2.55	53	cl1	0.18
19	с3	2.53	54	e32 .	0.05
20	e13	2.21	55	c81	0.02
21	e44	2.2	56	e78 [*]	-0.02
22	d-jones	2.15	57	e59	-0.1
23	c49	2.14	58	e2	-0.16
24	e56	2.05	. 59	e41 😽	-0.17
25	e61	2.02	60	e45	· -0.32
26	c27	1.98	61	c30	-0.,36
27	c68	1.77	62	c17	-0.49
28	c55	1.77	63	e49	-0.54
29	e38	1.77	64	e4	-1.19
30	c14	1.61	65	e21	-1.31
31	c26	1.61	66	c80	-1.35
32	c78	1.53	67	e55	-1.8 5
33	c47	1.43	. 68	e12	-2.17
34	e28	1.38	69	c82	-2.48
35	c6	1.34	70	e80 ̈	-6.49
			,	,	<u>ئ</u> ر

AVERAGE ROR 1.37

BALANCED OR INCOME ORIENTED INVESTMENT OBJECTIVE THREE YEARS ENDING JUNE 30, 1974 (83 pools)

		AVERAGE			•	AVERAG	E
RANK	CODE NAME	TOTAL RETURN	RΔ	NK	CODE NAME	TOTAL RE	
MANA	CODE WANTE	TOTAL RETURN	10	avic	OODE WILL	TOTAL IG	LUIUI
1	- c65	11.65 %	4	2	c14	-1.03 %	4
2	c62	5.52		3	c49	-1.04	
3 [°] .	c33	5.23	4	4	e52	-1.04	
4	c81	4.57		5	sp425	-1.11	
5 ·	c5	4.35		6	сб	-1.23	
6	c40	3.65		٠7	e77	-1.54	
7	e51	3.42	4	8	c29 *	-1.6	
8	c72	3.35		19	e53	-1.64	
9	c73	3.15		50	e61	-1.64	•
10	c54	2.73		51	e10	-1.72	
11	c70	2.72		52	sp500	-1.74	
12	c10	2.51		53	c47	-1.75 ,	
13	e15	1.99		54	e4	-1.8	
14	e17	1.9	1	55	c55	-1.9	
15	e47	1.65		56	_ c17 ·	-1.9	
16	c28	1.56	,	57	cl1	-1.99	
17	e22	1.55	!	58	c51	-2	
18	c24	1.42	!	59	c27	-2.25	
19	e70	1.35		60	,c78	-2.37	
20	e13	1.29	(61	e49	-2.46	
21	c66	1.19	(62	e72	-2.62	
22	c64	1.05	•	63	e45	-2.77	
23	∮ e37	1.03		64	e65	-2.77	
24	c32	1.02	,	65	e34	-2.87	
25	c84	0.98		66	c30	-2.96	
26	e56	0.91	*	67	. e2	-3.18	
27	c71	0.62		68	c67	-3.3	
28⊲	с9	0.42		69	e81.	-3.39	
29	.c 3	0.26		70	c85	-3.51	
30	d-jones	0.23		71	c41	-3.55	
31	e20	0.2		72	e59	-3.73	
32	c 26	0.15		73	e78	-4	
33	e44	-0.13		74	e32	-4.03	
34	é23	-0.28		75	e58	-4.26	
35	e48	-0.39		76	e41	-4.41	
36	· c46	-0.0		77	e8	-4.42	
37	e73	-0.73		78	c80	-4.43	
: 38	e57	-0.77	*	79	e12	-4.94	
39	e38	- 1		80	e21	-6.58	
40	c68	-1.01		81	e55	-7.94	
41	e28	-1.02		82	c82	-8.76	
		•		83	e80	-10.9	

AVERAGE ROR -0.79

BALANCED OR INCOME ORIENTED INVESTMENT OBJECTIVE ONE YEAR ENDING JUNE 30, 1974 (93 pools)

<u>RANK</u>	CODE NAME	AVERAGE TOTAL RETURN	<u>R</u>	ANK	CODE NAME	AVERAGE TOTAL RETURN
1	c62	4.19 %		47	c3	-10.61 %
2	c40	3.94		48	e8	-10.64
3	c5	-0.87		49	, e77	-10.83
4	c33	-1.29		50	c80	-10.85
5	c73	-2.49	•	51	e65	-11.02
6	e37	-2.71		52	e47	-11.14
. 7	c10	-2.81		53	c17 ,	-11.35
8	c65	-3.07		54	c78	-11.55 -11.5
9	e61	-3.51		55	c30	-11.52
10	e59	-3.68	1	56	c14	-11.65
11	c72	-4.14		57	e56 \	-11.73
12	e79	-4.73		58	c26	-11.77
13	c66	-5.01		59	e73	-12.13
14	e51	-5.35		60	c84	-12.15
15	c70	-5.49		61	e72	-12.28
16	e48	-5.58		62	- e57	-12.47
17	c54	-5.7 2		63	e53	-12.47
18	c29	-6.07		64	e38	-12.68
19	d-jones	-6.1		65	e12	-12.85
20	c68	-6.3		66	e83	-12.9
21	e82	-6.41		67	e78	-13
22	e13	-6.66		68	e17	-13.2
23	e76	-6.8		69	sp425	-13.74
24	e4	-7.08		70	c46	-14.03
25	e15	-7.24		71	e84	-14.04
26	c71	-7.4		72	c11	-14.48
27	e22	-7.55		73	sp500	-14.49
28	c9	-8.07		74	c49	-14.7
29	e45	-8.19		75	e34	-15.05
30	c64	-8.2		76	e23	-15.12
31	e46	-8.29		77	c27	-15.18
32	c28	-8.41		78	e32	-15:18
33	c32	-8.48	•	79	c67	-15.43
34	c24	-8.58		80	c41	-15.86
35	· c45	-8.61		81	c55	-16.2
36	e70	-8.64		82	e81	-16.61
37	c79	-8.64		83	e49	-16.79
38	e52	-9.09		84	e44	-17.17
39	e20	-9.13		85	e10	-17.51
40	e31	-9.13		86	e55	-18.16
41	c51	-9.14		87	c85	-19.06
42	e28	-9.53		88	e2	-19.46
43	c47	-9.88		89	e80	-19.47
44	e41	-10.25		90	e74	-20.29
45	c6	-10.25		91	c81	-24.12
46	e58	-10.27		92	c82	-24.77
		•	+	93	e21	-27.27
	•					

AVERAGE ROR -10:56



1974 NACUBO COMPARATIVE PERFORMANCE STUDY

Average Total Return of Institutions with Endowment Size \$50 Million or Greater (Category 1)

For Five-, Three- and One-Year Periods
Ending June 30, 1974

FIVE YEARS ENDING JUNE 30, 1974

RANK	CODE NAME	AVERAGE TOTAL RETURN	RANK	CODE NAME	AVERAGE TOTAL RETURN
1	c72	4.49 %	16	° c55	1.77 %
2	e63	3.69	- 17	c42	1.44
3	с9	2.81	.18	e28	1.38
4	c77	2.79	19	c29	1.26
5	e27	2.71	20	sp425	1.23
6	e35	2.56	21	c46	1.2
7	e18 .	2.48	22	e73	`1.17
8	d-jones	2.15	. 23	sp500	0.8
9	c31	2.12	24	e5	0.6
10	e11	2.06	25	e72	0.57
11	e56	2.05	26	e8	0.38
12	e61	2.02	27	el	-0.41
13	c27	1.98	28	e40	-0.61
14	c56	1.84	29	e36	-1.0 5
15	e38	1 .7 7 .	30	e21 :	-1.31
		•	31	c1 5	-1.97

AVERAGE ROR 1.42

ENDOWMENT SIZE \$50 MILLION OR GREATER THREE YEARS ENDING JUNE 30, 1974

RANK	CODE NAME	AVERAGE TOTAL RETURN	RANK	CODE NAME	AVERAGE TOTAL RETURN
1	c72	3.35 %	18	sp425	-1.11 %
2	c54	2.73	19	/ c42	-1.5
3	c31	1.19	20	/ c29	-1.6
4	e63	1.07	21 /	e61	-1.64
5	e56	0.91	22⁄	sp500	-1.74
6	e18	0.9	23	c55	-1.9 .
7	с9	0.42	24	c27	-2.25
8	e35	0.39	25	ell	-2.32
9	d-jones	/ 0.23	26	e 72	-2.62
10	c77	√ 0.14	27	c56	-2.86
11	e33 , `	-0.21	28	ē25	-3.48
12	c46 🦯	-0.4	29	e40	-3.69
13	e73 🖟	-0.73	30	e36	-4.12
14	e57	-0.77	. 31	.e8	-4.42
15	e,∄8	-1	32	el	- 5 .
16	,ė28	-1.02	33	e21	-6.58
17	∕ e27	-1.02	34	c15	-6.68
			35	e5	-6.88

AVERAGE ROR -1.55

ENDOWMENT SIZE \$50 MILLION OR GREATER ONE YEAR ENDING JUNE 30, 1974

RANK	CODE NAME	AVERAGE TOTAL RETURN		RANK	CODE NAME	AVERAGE TOTAL RETURN
1	e61	- 3.51 %		19	e57	-12.47 %
2	c72	- 4.14		20	e38	-12.68
3	e36	- 5.56		21	e18	-13.23
4	c54	- 5.72		22	sp425	-13.74
5	c29	- 6.07		23	c46	-14.03
6	d-jones	- 6.1		24	c15	-14.04
7	c9 ¯	- 8.07	,	25	e25	-14.13
8	e33	8.46		26	sp500	-14.49
9	e31	- 9.13		27	c42	-14.96
10	c31	- 9.18		28	· c27	-15.18
11	e28	- 9.53		29	e27	-15.7
12	e40	- 9.98		30	c55	-16.2
13	c77	-10.14		31	ell	-17.69
14	c56	-10.24		32	. el	- 17.73 /
15	e8	-10.64	*	33	e63	-17.86
16	e56	-11.73	4	34	e35	-22.58
17	e73	-12.13		35	e5	-22.8
18	e72	-12.28		36	e21	-27.27

AVERAGE ROR -12.48

1974 NACUBO COMPARATIVE PERFORMANCE STUDY

Average Total Return of Institutions with

Endowment Size Between \$10-\$50 Million (Category 2)

For Five-, Three- and One-Year Periods
Ending June 30, 1974

FIVE YEARS ENDING JUNE 30, 1974

		AVERAGE			AVERAGE
RANK	CODE NAME	TOTAL RETURN	RANK	CODE NAME	TOTAL RETURN
					
1 -	, c23	7.14 %	21	sp500	0.8 %
. 2	c39	4.45	22	e39	0.74
3	e51	3.87	23	e71	0.73
	c65	3.62	24	e34	0.64
4 5	e3	3.56	25	c21	0.16
6	e47	3.55	26	e32	0.05
7	e17	3.44	27	c12	0.04
8	e6	3.38	28	c63 ,	-0.07
9	c28	3.29	29	e2	-0.16
10	e16	3.28	30	e41 ,	-0.17
11	e15	2.67	31	e45	-0.32
12	c3	2.53	32	c17	-0.49
13	c2	2.45	33	e49	-0. 54
14	c19	2.25	34	e19	-0.94
15	d-jones	\2.15	35	e68	-1.31
16	⁴ c49	2.14	36	c7	-1.51
17	c6	1.34	37	e55	-1.8 5
18	e20	1.29	38	∜ c82	-2.48
19	sp425	1.23	39	e75	-2.71
20	e53	1.02	40	e62	-3.92
			41	e69	-4.22

AVERAGE ROR 1

ENDOWMENT SIZE BETWEEN \$10-\$50 MILLION THREE YEARS ENDING JUNE 30, 1974

RANK	CODE NAME	AVERAGE TOTAL RETURN	RANK	CODE NAME	AVERAGE TOTAL RETURN
1	c65	11.65 %	23	с6	-1.23 %
1 2	c23	7.31	24	e53	-1.64
3	e51	3.42	25	sp500	-1.74
4	e6	2.54	26	e39	-1.7 5
5	c2	2.3	27	c17	-1.9
6	e15	1.99	28	c21	-2.41
7	e17	1.9	29	e49	-2.46
- 8	c39	1.7	30	e45	-2.77
- 9	e47	1.65	31	e34	-2.87
10	e3	1.6	32	e2	-3.18
11	c28	1.56	33	c16	-3.18
12	e37	1.03	34	c12	-3.79
13	c 7 1,	0.62	35	e32	-4.03
14	e16	0.32	. 36	e68	-4.18
15	c3	0.26	37	· e41	-4.41
16	d-jones	0.23	38	e19	-4.61
17	e20	0.2	39	e62	-5.5
18	c34	- 0.15	40	c63	-6.05
19	c19	- 0.8	41	с7	-6.06
20	e71	- 0.89	42	e75	-6.16
21	c49	- 1.04	43	e55	-7.94
22	sp425	- 1.11	44	c82	-8.76
			45	e69	-8.86

AVERAGE ROR -1.32

EXHIBIT 3 - PART C¹
Page 5

ENDOWMENT SIZE BETWEEN \$10-\$50 MILLION ONE YEAR ENDING JUNE 30, 1974

						•
		AVERAGE			·	AVERAGE
RANK	CODE NAME	TOTAL RETURN		RANK	CODE NAME	TOTAL RETURN
1	c23	- 0.94 %		24	e53	-12.48 %
2	√ e37	- 2.71		25	c16	-12.87
3	¢65 🌞	- 3.07		26	e68	-13.03
4	e16	- 4.06		27	e19	-13.09
5	e51	- 5.35		28	e17	-13.2
6	d-jones	- 6.1		29	e71	-13.66
7	e15	- 7.24		30	sp425	-13.74
8	c 71	- 7.4		31	sp 500	-14.49
9	e 45	- 8.19		32	e39	-14.56
10	e46	- 8.29		33	c39	-14.69
11	c28	- 8.41		34	e75	-14.69
12	c2	- 8.43		35	c49	-14.7
13	e62	- 8.98		36	e34	-15.05
14	e20	- 9.13		37	e32	-15.18
15	е3	- 9.85		38	c21	-16.42
16	e41	-10.25		39	c63	-16.71
.17	c6	-10.25		40	e49	-16.79
18	c19	· - 10.58		41	e55	-18.16
19	c3	-10.61		42	e2	-19.46
20	c34	-10.82		43	c82	- 24.77
21	e47	-11.14	•	44	c12	-24.82
22	c17	-11.35		45	с7	-27.17
23	е6	-12.01		46	e69	-28.23
						· ·

AVERAGE ROR -12.46

1974 NACUBO COMPARATIVE PERFORMANCE STUDY

Average Total Return of Institutions with Endowment Size \$10 Million or Less (Category 3)

For Five-, Three- and One-Year Periods

Ending June 30, 1974

FIVE YEARS ENDING JUNE 30, 1974

			AVERAGE			, AVERAGE
	RANK	CODE NAME	TOTAL RETURN	RANK	CODE NAME	TOTAL RETURN
			0.07.5	. 00	-76	1 0/ %
	1	c62	9.37 %	26	c76	1.34 %
	2	c13	5.92	27	c41	1.32
	3	e23	5.57	28	sp425	1.23
	4	c84	4.08	29	e10	1.09
,	5	c 5	3.72	30	c24	0.85
•	6	c10	3.64	31	c51	0.84
	7	c60	3.46	32	sp500	0.8
	8	c18	3.41	33	e7	0.68
	9	c20	3.15	34	~e30	0.67
	10	c64	3.14	35	e48	0.4
	11	c66	* 3	36	e81	0.33
	12	e22	2.98	37	e65	0.31
	13	c50	2.93	38	c11	0.18
	14	c86	2.71	39	c81	0.02
	15	c40	2.64	40	e78	-0.02
	16	e42	2.64	41	e59	-0.1
	17	c32	2.55	42	c30	-0.36
	18	e13	2.21	43	c57	-0.63
	19	e44	2.2	44	e4	-1.19
	20	d-jones	2.15	45	ъ с80	-1.35
	21	· c68	1.77	. 46	e26	-1.35
	22	c26	1.61	47	c48	-1.39
	23	c14	1.61	48	e12	-2.17
	24	c78	1.53	49	c58	-2.94
	25	c47	1.43	50	c44	-4.44
	-			51	e80	-6.49

AVERAGE ROR 1.31

ENDOWMENT SIZE \$10 MILLION OR LESS THREE YEARS ENDING JUNE 30, 1974

RANK	CODE NAME	AVERAGE TOTAL RETURN	RANK	CODE NAME	AVERAGE TOTAL RETURN
1	c62	5.52 %	33	c14	-1.03 %
· 2	c33	5.23	34	e52	-1.04
3	c81	4.57	35	sp425	-1.11
4	c5	4.35	36	e30	-1.31
5	- c40	3.65	37	c59	-1.4
6	c73	3.15 .	38	e77	-1.54
7	c13	2.85	39	e10	-1.72
8.	c70	2.72	40	sp500	-1.74
9	c10	2.51	41	c47	[*] -1.75
10	c20	2.03	42	e4	-1.8
11	c60	1.73	43	∍ c11	-1.99
12	c86	1.66	- 44	c51	-2
13	e22	1.55	45	c78	-2.37
14	c69	1.45	46	, c57	-2.74
. 15	c24	1.42	47	e65	-2.77
16	e70	1.35	48	c30	-2.96
17	e13	1.29	49	c67	-3.3
18	c66	1.19	50	e81	-3.39
19	e42	1.07	51	c85	-3.51
20	c64	1.05	52	c41	-3. 55
21	c32	1.02	53	e59	-3.73
22	c84	0.98	54	e78	-4
23	c18	0.94	55	е9	-4.11
24	c50	0.55	56 ⁻	e58 ्	-4.26
25	d-jones	0.23	57	c80	`-4.43
26	c26	0.15	58	e24	-4.84
27	e44 .	-0.13	₆ 59	e12	-4.94
28	e23	-0.28	60	e26	-5.61
29	e7	-0.37	61	c48	-6.71
30	e48	-0.39	62	e64	-7.45
31	c76	-0.6	63	c58	-8.54
32	c68	-1.01	64	c44	-9.85
	٢٠		65	e80	-10.9

AVERAGE ROR -1.09

ENDOWMENT SIZE \$10 MILLION OR LESS ONE YEAR ENDING JUNE 30, 1974

		AVERAGE			AVERAGE
RANK	CODE NAME	TOTAL RETURN	RANK	CODE NAME	TOTAL RETURN
			,		
1	c62	4.19 %	∖ 38	e58	-10.27 %
2	c40	3.94	∖ 39	e77	-10.83
-3	c35	3.81	\ 40	c80	-10.96
4	c69	3.67	\ 41	e 65	-11.02
5	c59 ·	0.63	42	c60	-11.29
. 6	c86	-0.82	\ 43	c78	-11.5
7	ຶ c5	-0.87	\44	c3 <u>0</u>	-11. 52
8	¢33 ·	-1.29	, 4 5	c14	-11.65
9	c13	-2.38	46	c76	-11.72
10	c73	-2.49	47 \	c26	-11.77
11	. с44	-2.56	·48 \	∖ e42	-11.89
12	c10	-2.81	49	\ c84	-12.26
13	e59	-3.68	50 .	\ e30	-12.39
14	e79	-4.73	51	€ c57	-12.83
15	c66	-5.01	52 .	e12	-12.85
16	c70	-5.49	53	` e83	-12.9
17	e48	- 5.58	54	e78	- 13
18	d-jones		55	c50	-13.31
19	- c68	-6.3	56	sp425	-13.74
20	e82	-6.41	57	e84	-14.04
. 21	c20	-6.45	58	· c11	-14.48
22	e13 .	-6. 66	59	sp500	-14.49
23	e76	-6.8	60	e23	-15.12
24	c18	-7.07	61	c67	-15.43
25	е4	-7.08	62	c41	-15.86
· 26	e22	-7.55	63	e81	-16.61
27	c64	-8.2	64	e44	-17.17
28	c32	-8.48	65	e10	-17.51
	¹ c24	-8.58	66	c85	-19.06
30	c45	, -8.61	67	e80	-19.47
31	e70	-8.64	68	c48 `	-19.7
32	c79	-8.64	69	e9	-20.27
33	e52	-9.09	70	e74	-20.29
34	c <u>5</u> 1	-9.14	71	e26	-21.15
35	e7	-9.2	72 72	c81	-24.12
36	c47	-9.88	73	e64	-25.03
37	e24	-10.01	74	c58	-36.83

AVERAGE ROR -10.2

1974 NACUBO INVESTMENT QUESTIONNAIRE

ENDOWMENT MARKET VALUE AS OF JUNE 30, 1974, OF 145 RESPONDING INSTITUTIONS

			6/30/74 MARKET VALU
	INSTITUTION	1	(000 OMITTED)
	Harvard University	e de la companya de l	1,168,760
	Yale University	7.1	461,100
3	Columbia University		434,000
4	University of Rochester		363,500
5 -	Princeton University		344,880
6	Stanford University	•	311,746
7	University of California	. *	311,594
8	University of Chicago		236,300
9	Northwestern University		197,819
10	Dartmouth College		155,295
11	Rice University		145,376
12	Washington University		142,273
13	California Institute of Technology		130,883
14	Johns Hopkins University		126,900
15	Vanderbilt University		115,427
16	Wesleyan University		108,906
17	University of Delaware		106,472
18	Carnegie-Mellon University		103,435
19	Wellesley College		99,856
20	McGill University		99,290
21	University of Virginia		97,152
22	Brown University		87,573
23	University of Pittsburgh		77,872
24	Smith College		76,111
25	University of Michigan	·	75,818
26	Case Western Reserve University		73,362
27	Oberlin College		71,821
28	Amherst College		70,225
29	Berea College		62,018
30	Williams College		59,451
31	Rensselaer Polytechnic Institute		57,503
32	Swarthmore College		50,346
33	University of Richmond		50,099
34	Lehigh University		46,469
35	Brandeis University		41,400
36	Agnes Scott College		40,840
37	Wake Forest University	•	40,270
38	Mount Holyoke College \		38,030
39	Bryn Mawr College		36,351
40	State University of New York at Buff	alo	35,250
41	Lafayette College		35,092
42	Cooper Union		34,455
43	Bowdoin College		32,272
44	University of Miami		31,675
45	University of Minnesota		31,618
	•		



		6/30/74 MARKET VALU
	INSTITUTION	(000 OMITTED)
		**
46	Carleton College	30,4 05
47	University of Wisconsin	30,06 5
48	Tufts University	27,577
49	Principia College	²⁷ ,553
50	Hampton Institute	25,724
51	Bucknell University	24,901
52	Rutgers, The State University	24,074
5 3	Barnard College	23,949
54	Furman University	22,353
~5 5	Colgate University	21,704
56	Academy of the New Church	20,986
5 7	Drew University	20,7 55
58	Middlebury College	19,804
5 9	Lawrence University	19,448
60	Macalester College	18,918
61`	Colorado College	17,926
62	Occidental College	17,234
63	Mills College	17,043
64	Willamette University	16,473
65	Columbia University Teachers College	16,440
66	Denison University	. 16,308
67	University of Missouri	15 ,65 5.
	Rhode Island School of Design	14,151
69	Albion College	14,087
70	Bates College	13,751
71	University of Illinois	13,613
72	University of Vermont	13,513
73	Indiana University	13,480
74	Hamline University	13,378
7 5	Simmons College	13,227
76	Baylor College of Medicine	13,175
77	George Washington University	11,688
78	College of Wooster	11,571
79	Sweet Briar College	11,319
80	Franklin and Marshall College	11,058
81	Dickinson College	10,970
82	Berry College	10,964
83	Michigan State University	10,555
84	Coe College	9,509
. 85	University of Tennessee	9,208
86	Wells College	9,189
87	University of Nevada	8,934
88	Long Island University	8,679
89	University of Santa Clara	8,552
90	The Pennsylvania State University	8,374
91	Oregon State Higher Education System	8,276
92	Hendrix College	8,157
93	Baldwin-Wallace College	8,133
94	Pacific School of Religion	8,020
95	Wesleyan College	8,019
33	MESTENAU COTTERE	0,017



6/30/74 MARKET VALUE

	•	OLOOLIA LIVINGE AVE
	INSTITUTION	(000 OMITTED)
0.6	Manage University	7,819
96 97		7,803
98	-	7,632
99	Kalamazoo College	7,515
		7,445
100	St. John's College	7,445 7,309
101	The Catholic University of America Drake University	6,380
102	· · · · · · · · · · · · · · · · · · ·	6,002
103	-	5,572
104	University of Arizona Babson College	5,411
105	-	5,145
106		5,049
107	Alma College	4,817
108		4,600
109	-	4,566
110		4,117
.111	· · · · · · · · · · · · · · · · · · ·	`4,029
112	•	
113	· · · · · · · · · · · · · · · · · · ·	3,881 3,780
114	· · · · · · · · · · · · · · · · · · ·	
115	· · · · · · · · · · · · · · · · · · ·	3,594
116		3,491
117	_	3,413
118		3,242 3,029
119		2,884
120	· · · · · · · · · · · · · · · · · · ·	2,797
	North Central College Ridle delah of College of Toutiles and Science	
122		2,646
123	•	2,505
124		2,178
125	•	2,129
126		1,680
127		1,474
128	-	1,433
129 130	Taylor University University of Utah	1,401
	•	1,325
131		1,290
132 133		1,250
134		1,231
135	· =	1,176
		1,165
136	_	1,061
137		1,052
138		940
139	· ·	737
140	Bowling Green State University	556
141	Westmar College	503
142	· · · · · · · · · · · · · · · · · · ·	421
143		333
144		295
145	Northern Michigan University	



1974 NACUBO INVESTMENT QUESTIONNAIRE

TOTAL RETURN SPENDING FORMULAS FOR 25 INSTITUTIONS

INSTITUTION

SPENDING FORMULA

Berea College

4.6% of 3-year moving average 1 year

Brown University

Voted % of 12/31 projected market of last completed calendar year

Bryn Mawr College

5% return on 5-year moving average of market value of common stock investments

California Institute of Technology

5% of market value of pooled endowment portfolio averaged over prior 3 years

Carleton College

5% of 3-year moving average set back 1 year, are changing to 5-year moving average not set back

College of Wooster

5.6% annually of 36-month moving average on consolidated endowment assets

Dartmouth College

4.9% of 3-year quarterly moving average lagged 1 year and quarterly average market value of net additions, in process of revision for 1974-75

Kalamazoo College

5% of 3-year time-weighted moving average for 3 most recent years prior to budget making year

Kenyon College

Income from pool is 5% of market value of intangible assets on hand at beginning of fiscal year. Gains are utilized to extent that interest and dividends fall short of 5% amount. Income from separately invested funds is added to 5% amount.

Lawrence University

5% of 3-year quarterly moving average, lag of 1 fiscal year

Mills College

6% of 3-year moving average

State University of New York, Binghamton 9% average 3-year market value



Northwestern University

Occidental College

Ohio Wesleyan University

Pacific School of Religion

University of Rochester

Simmons College

Smith College

Stanford University

University of Vermont

Virginia Military Institute

University of Virginia

SPENDING FORMULA

5% of prior 12 quarters average market value

5% of 3-year moving average

Average rate of total return for 3 previous years is deducted from the average inflation rate in the U.S. economy; the remainder up to 5%, applicable to non-restrictive endowments, is so distributed and the balance is deposited in a gain reserve for possible use in subsequent years.

From 5.4% down to 5% at rate of .1% reduction per year.

Utilize no more than 5% of average market value of portfolio for preceding 5 years

5% of previous 6/30 market value

4½% (5% starting 1974-75) of 12 past quarters average market value of pooled endowment. The 12th quarter is 31 March before start of budget year.

Guided by conventional practice, but apply no hard and fast rules. Current year rate of income appropriation was set at 5.4% of 3-year average to beginning of current year. Upcoming year's rate is reduction to 5%, but on longer 5 year average. Will vary in future, since current market declines would cause actual decline in income distribution at any fixed percentage distribution rate.

4% of 3-year moving average market value as of December 31

5% of market value of fund at beginning of preceding year

4% of 3-year average market value

Wesleyan College

Yale University

SPENDING FORMULA

Operating expenditures - 5% of 3-year moving average value of portfolio ... Capital expenditures - 2% of 3-year moving average of portfolio

Principal year budgeted spending plus or minus adjustment for (smoothed) historical investment returns

1974 NACUBO INVESTMENT QUESTIONNAIRE

METHOD OF BOND PRICING

INSTITUTIO	N
------------	---

Academy of the New Church

Agnes Scott College

University of Arkansas

Atlantic Christian College

Babson College

Baldwin-Wallace College

Barnard College

Berea College

Berry College

Bowling Green University

Brandeis University

Brown University

Bryn Mawr College

Bucknell College

California Institute of Technology

University of California

Carleton College

Carnegie-Mellon University

Carroll College

Catholic University

University of Chicago

Colgate University

HOW DO YOU PRICE BONDS?

Wall Street Journal

Quoted Market Values

Market Quotations

Market Value

Between Bid and Asked

Cost Value

At Cost

Done by Bank

Average Market Value

Cost

Wall Street Journal, then Brokers

if Necessary

Advisor

Market Value

Current Market Quotations

S & P and Merrill Lynch

Salomon Brothers

Book Value and New York Bond

Market

Custodian Bank

Market Value

At Market

Dealers and Brokers

Price on Last Trading Date

HOW DO YOU PRICE BONDS?

College of Wooster

Custodian Bank

Colorado College

Cost

Columbia University

Saloman Brothers and Brokers

Columbia University Teacher's College

Market Value

University of Connecticut

Market Value

Cooper Union Academy

Market Quote

Dartmouth College

Telestat Tapes, otherwise 3 Bond

Dealers, Quotes are Averaged

University of Delaware

Market Price

Denison University

Outside Managers

University of Denver

Cost

Dickinson College

Advisory Service

Drake University

Cost

Drew University

Cost

Eastern Michigan University

At Cost

University of Evansville

S & P Quotations

Franklin & Marshall

On Current Yield Basis

Furman University

Current Market Value

Hampton Institute

Cost

Harvard University

Merrill Lynch and Brokers

Hendrix College

Quotes from Bond Dealers

University of Illinois

Wall Street Journal or S & P

Bond Guide

Indiana University

Market Value

Johns Hopkins University

Bond Dealers - Salomon

Kansas State Teachers College

At Cost



HOW DO YOU PRICE BONDS?

Kenyon College

Market Value

Lafayette College

S & P Bond Guide

Lawrence University

Market

Lehigh University

Wall Street Journal

Long Island University

At Cost

Lynchburg College

By Yield

McGill University

Bid and Dealers

Macalester College

Most Recent Quotation

Medical College of Pennsylvania

Bid Price

Mercer University

Merrill Lynch

Miami University

Book Value

Michigan State University

Salomon

University of Michigan

Merrill Lynch, Wall Street

Journal, First Boston, Salomon

Middlebury College

Close of Market or Quotations Obtained from other Financial

Sources

Mills College

At Market

University of Minnesota

First Boston

University of Mississippi

At Cost

University of Missouri

S & P or Moody's

Monmouth College

Market Value

Mount Holyoke College

At Cost

Muhlenberg College

Market Quote

University of Nevada

Telestat Pricing Service

New York University

Quoted Market Prices

State University of New York,

Market

Binghamton



State University of New York, Buffalo

State University of North Carolina,

Greensboro

Northwestern University

Oberlin College

Occidental College

Ohio Wesleyan University

Oregon State System

Pacific School of Religion

Pennsylvania State University

Philadelphia College of Textiles

University of Pittsburgh

Princeton University

University of Puget Sound

Rensselaer Polytechnic Institute

Rice University

University of Rochester

Rollins College

Rutgers State University

University of San Francisco

University of Santa Clara

Simmons College

Smith College

Stanford University

Stephens College

Swarthmore College

HOW DO YOU PRICE BONDS?

Investment Advisors and Brokers

Fiscal Agent

Quotes from Bond Houses

Commercial Pricing Service

Market

Market or Appraisal

Brokerage Firms

Cost Price and Market Value

Recorded at Cost

Market Value

Market Quotation

Closing Price

Market Value - Wall Street Journal

Cost

At Market

None Held

Market Value - Investment Advisor

Cost or Average Market Value

Market Value

Market Value

Moody's, Investment Counsel

Wall Street Journal, Moody's

Salomon Brothers

Market Value

Market Value



Sweet Briar College

University of Tennessee

Tufts University

Vanderbilt University

University of Vermont

University of Virginia

Washington State University

Washington University

George Washington University

Wayne State University

Wells College

Wesleyan College

Willamette University

Williams College

University of Wisconsin

Yale University

HOW DO YOU PRICE BONDS?

S & P Service, if not Listed Use Yield To Maturity on Sector Basis

Market or Dealers

Close Where Listed and Where Not Listed - Bid By Salomon, Merrill

Lynch

S & P Bond Guide - External Managers

Do Not Hold Any

Individual Quotations Wherever Possible, Otherwise from a Matrix

Market Value

Trust Company Advisor

At Cost

Bond Pricing Service

Cost

Market Value

National Pricing Service

At Cost

Market Value

Market Value



EXPLANATION OF FIGURE USED FOR MEASURING

PERFORMANCE OF PORTFOLIO MANAGER

The choice between the geometric average return (average total return) figure and the internal rate of return figure depends upon what it is one wishes to measure: the skill of the individual or committee who actually manages the investment of the endowment fund, or the success of the investment management coupled with the decision or policy that governs withdrawal of funds from the endowment (and contribution of funds to the endowment). Both figures are "correct," but the internal rate of return should not be used for judging portfolio management, nor should the geometric average be used for judging the overall results of portfolio management and decisions on when to add and withdraw funds.

For most endowment funds the geometric average is probably the more important figure. This is particularly true if additions of funds to an endowment and withdrawals of funds do not reflect any judgment skill, but simply follow a policy of adding funds when contributions are received and withdrawing income either when the dividends and interest are received or at predetermined dates. The reason for looking at the internal rate of return in addition to the geometric average is to determine how well the investor is timing additions and withdrawals.

College officials often object to the use of the geometric average, protesting that: "This average assumes that income is reinvested, and we don't reinvest income." It is quite true that they do not reinvest income, but if what is to be determined is the quality of investment performance being achieved by the manager of the endowment fund, then the performance record of the manager should not be penalized by unfortunate timing of withdrawals over which the manager has no control.

Adapted from <u>Performance Measurements and Investment Objectives for Educational Endowment Funds</u> by J. Peter Williamson (New York: The Common Fund, 1972).



PERFORMANCE OF POOLED INVESTMENT FUNDS

EXPLANATION OF COMPUTATIONS

The computations required to create the tabular and performance data used in the comparative performance of pooled investment funds are accomplished by a computer program entitled FUNDPER. The program FUNDPER draws on the basic data file compiled for each individual endowment pool. Data contain the endowment pool's year-end unit value (at market) and the dollar value per unit of income received for the year. Drawing on the basic file, FUNDPER first creates a yearly chart of tabulated data as shown below; for any number of consecutive years within the limits of the basic data file it calculates various performance statistics.

STATISTICAL SUMMARY SHEET

Institutional Code Name - SP500

	Col. 1 Fiscal Year	Col. 2 Base Index	Col. 3 Unit Value	Col. 4 Apprecia- tion	Col. 5 Income Per Unit	Col. 6 Yield Percent	Col. 7 Growth Percent	Col. 8 Total Return Percent
	1969	100	97.71			-		
	1970	74.42	72.72	-24.99	3.18	3.25	-25.58	-22.32
	1971	102.04	99.7	26.98	3.1	4.26	37.1	41.36
	1972	109.65	107.14	7.44	3.07	3.08	7.46	10.54
	1973	106.71	104.27	- 2.87	3.21	3	- 2.68	0.32
!	1974	88.02	86	-18.27	3.5001	3.36	-17.52	-14.17
	Arith	metic aver	ages 5 vrs	s. ending in	1974	3.39	- 0.24	3.15
	1,	tric avera	-	3.39	- 2.52	0.89		
Appreciation Corresponding Average Rate of Return (ROR)							-11.	98 Percent
			_	Reinvested	. (/	v		04 Percent
		sponding A						8 Percent
	30							

Exhibit A contains examples of the mathematics used by FUNDPER for that portion of the tabulated data which is computed. The balance of the tabulated data is reproduced from the basic data file.

An explanation of the columns for 1974 in the above chart is as follows:

Col. 1 Fiscal Year: July 1/June 30

Col. 2 <u>Base</u>: This gives the first year the unit value is available an index of 100 and adjusts the succeeding unit values accordingly. In the above example the first year the S & P 500 unit value figures were available was the fiscal year ending 6/30/69.



- Col. 3 Unit Value: Supplied by participating institution.
- Col. 4 Appreciation: Appreciation is computed by subtracting the 1972 unit value from the 1974 unit value.
- Col. 5 Income Per Unit: Supplied by participating institution.
- Col. 6 <u>Yield Percent</u>: Yield percent is computed by taking the 1974 income per unit, dividing it by the 1973 unit value, and multiplying by 100.
- Col. 7 Growth Percent: Growth percent is computed by taking the 1974 appreciation, dividing it by the 1973 unit value, and multiplying by 100.
- Col. 8 Total Return Percent: Total return percent is computed by adding the 1974 appreciation to 1974 income, then dividing by the 1973 unit value, and multiplying by 100.

Exhibit B contains examples of the mathematics used by FUNDPER in determining arithmetic and geometric averages of yield, growth, and total return for the period specified. They are computed as follows:

- 1. Arithmetic Average 5 Years Ending 1974: Add either the 5 yearly yield, growth, or total return percentages and divide by 5.
- 2. Geometric Average 5 Years Ending 1974: Add one to each of the 5 yearly yield, growth, or total return percentages expressed as a decimal, multiply these figures, then take the fifth root of that value, subtract 1, and multiply by 100.

Exhibit C contains examples of the mathematics used by FUNDPER in making comparative performance computations. Using the five-year period 1969-1974 as an example, the four comparative performance percentages are computed as follows:

- 1. <u>Total Percent Appreciation</u>: The total percent appreciation is computed by dividing the 1974 unit value by the 1969 unit value, subtracting 1, and multiplying by 100.
- 2. Corresponding Annual Geometric Average Growth Rate: The corresponding annual geometric growth rate is computed by taking the fifth root of the 1974 unit value divided by the 1969 unit value, subtracting 1, and multiplying by 100.
- 3. <u>Total Percent Appreciation with Income Reinvested</u>: The total percent appreciation with income reinvested is calculated as follows:
 - a. Determining the number of units that could have been purchased with income of one unit for the year 1969-70, using the average of the 1969 and 1970 unit values as the price of a new unit.



- b. Adding the new units so purchased to the original unit held.
- c. Determining the income on the new total units held for the next year 1970-71, calculating the number of units that could have been purchased with income in that year, again using the average beginning and end of year unit values as the price of new units, and so on to the end of the five years, i.e., the end of 1974.
- d. Calculating the total value of the units held as of 1974 multiplied by the 1974 unit value, and dividing this by the 1969 unit value, subtracting 1, and multiplying by 100.
- 4. Corresponding Annual Geometric Average Growth Rate: The corresponding annual geometric average growth rate (with income reinvested) is computed by adding 1 to the total of the units purchased during each of the five years, multiplied by the unit value at the end of 1974, divided by the 1969 unit value, taking the fifth root, subtracting 1, and multiplying by 100.



Exhibit A

Tabulated Data Computation

- Col. 4 Appreciation 1974 Unit Value - 1973 Unit Value 86.00 - 104.27 = -18.27
- Col. 6 Yield Percent (1974 Income/1973 Unit Value) X 100 (3.5001/104.27) X 100 = 3.36%
- Col. 7 Growth Percent (1974 Appreciation/1973 Unit Value) X 100 (-18.27/104.27) X 100 = -17.52%
- Col. 8 Total Return Percent (1974 Appreciation + 1974 Income)/1973 Unit Values X 100 [(-18.27 + 3.5001)/104.27] X 100 = -14.17%

Exhibit B

Arithmetic and Geometric Averages

Arithmetic Average Total Return Percentage* (Total Return Percentage for 1969-70 + 1970-71 + 1971-72 + 1972-73 + 1973-74) $\frac{-22.32\% + 41.36\% + 10.54\% + .32\% + (-14.17\%)}{5} = 3.15\% \text{ for 5 years ending}$ June 30, 1974

Geometric Average Total Return Return Percentage*
([[Total Return for (1969-70 + 1)X(1970-71 + 1)X(1971-72 + 1)X(1972-73 +1)X
(1973-74 + 1)] ↑ (1/5)]-1)X 100

*NOTE: Average yield and growth percentage are calculated in the same manner



Exhibit C

Comparative Performance Measurement Computations

1. Total Percent Appreciation

$$\left(\left(\frac{1974 \text{ Unit Value}}{1969 \text{ Unit Value}}\right) - 1\right) \times 100$$

$$\left(\left(\frac{86.00}{97.71} \right) - 1 \right) \times 100 = -11.98\%$$

2. Corresponding Annual Geometric Average Growth Rate Percentage

$$\left(\left(\frac{1974 \text{ Unit Value}}{1969 \text{ Unit Value}}\right) \uparrow (1/5)\right) - 1\right) \times 100$$

$$\left(\left(\frac{86.00}{97.71}\right) \uparrow (1/5)\right) - 1\right) \times 100 = -2.52\%$$

3. Total Percent Appreciation with Income Reinvested

Average of 1969 and 1970 Unit Values = Units Purchased with 1970 Income

$$\frac{3.18}{(97.71 + 72.72)/2} = .03732$$
 Units

(1 + Units Purchased with 1970 Income) X 1971 Income Per Unit = Units Purchased Average of 1970 and 1971 Unit Values with 1971 Income

$$\frac{(1 + .03732) \times 3.1}{(72.72 + 99.7)/2} = .0373 \text{ Units}$$

(1 + Units Purchased with 1970 + 1971 Income) X 1972 Income Per Unit = Units Average of 1971 and 1972 Unit Values Purch

rage of 1971 and 1972 Unit Values Purchased with 1972
03732 + .0373) X 3.07 Income

$$\frac{(1 + .03732 + .0373) \times 3.07}{(99.7 + 107.14)/2} = .0319 \text{ Units}$$

(1 + Units Purchased with 1970 + 1971 + 1972 Income) X 1973 Income Per Uni: = Average of 1972 and 1973 Unit Values

$$\frac{(1 + .03732 + .0373 + .0319) \times 3.21}{(107.14 + 104.27)/2} = .0336 \text{ Units}$$

Units Purchased with 1973 Income

<u>(1 + Units Purchased with 1970 + 1971 + 1972 + 1973 Income) X 1974 Income Per</u>

Average of 1973 and 1974 Unit Values

<u>Unit = 1974 Unit =</u>

$$\frac{(1 + .03732 + .0373 + .0319 + .0336) \times 3.5001}{(104.27 + 86)/2} = .04195 \text{ Units}$$

Units Purchased With 1974

Income

Exhibit C (Continued)

4. Corresponding Annual Geometric Growth Rate

STATISTICAL SUMMARY SHEET

Institutional Code Name - sp500

Col. 1	Col. 2	Co1. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
Fiscal	Base	Unit	Apprecia-	Income	Yield		otal Return
<u>Year</u>	Index	<u>Value</u> 47.37	tion	Per Unit	Percent	Percent	Percent
1957	100	47.37	0.10	1 70	2 (5	۸ ۳	0.04
1958	95.5		- 2.13	1.73	3.65	- 4.5	- 0.84
1959	123.43	58.47	13.23	1.79	3.96	. 29.24	33,2
1960	120.16	56.92	- 1.55	1.95	3.34	- 2.65	0.68
1961	136.46	64.64	7.72	1.94	3.41	13.56	16.97
1962	115.58	54.75	- 9.89	2.06	3.19	-15.3	-12.11
1963	146.44	69.37	14.62	2.2	4.02	26.7	30.72
1964	172.45	81.69	12.32	2.38	3.43	17.76	21.19
1965	177.58	84.12	2.43	2.61	3.2	2.97	6.17
1966	178.89	84.74	0.62	2.83		. 0.74	4.1
1967	191.34	90.64	5.9	2.9	3.42	6.96	10.38
1968	210.22	99.58	8.94	2.99	3.3	9.86	13.16
1969	206.27	97.71	- 1.87	3.13	3.14	- 1.88	1.27
1970	153.51	72.72	-24.99	3.18	3.25	-25.58	-22.32
1971	210.47	99.7	26.98	3.1	4.26	37.1	41.36
1972	226.18	107.14	7.44	3.07	3.08	7.46	10.54
1973	220.12	104.27	- 2.87	3.21	3	- 2.68	0.32
1974	181.55	86	-18.27	3.5001	3.36	-17.52	-14.17
Arithmet	ic America	o 10 Vmc	Ending in	1074	3.34	1.74	5.08
	c Averages		Ending in .	1374	3.34	0.52	3.87
Geometii	c Averages	•			3.3 4	0.32	3.07
Apprecia							Percent
			of Return (1	ROR)			Percent
	tion with		invested				Percent
Correspo	nding Aver	age ROR				3.85	Percent
Arithmet	ic Average	s 5 Yrs. 1	Ending in 1	974	3.39	-0.24	3.15
	c Averages				3.39	-2.52	0.89
00000011		•				:	
Apprecia	tion					-11.98	Percent
	nding Aver	age ROR				- 2.52	Percent
	tion with		invested				Percent
	nding Aver		21.1 00 000			0.8	Percent
COLLEDPO	narne mor	abo Kok					
Arithmet	ic Average	s 3 Yrs.	Ending in 1	974	3.14	-4.25	-1.1
	c Averages				3.14	-4.81	-1.63
Ammer						19 7%	Percent
Apprecia		na a non					Percent
	nding Aver						
	tion with		ınyested	••			Percent /
Correspo	nding Aver	age RUR				- 1./4	Percent



APPENDIX III

Page 2

Arithmetic Averages 1 Yr. Ending in 1974	. 3 .3 6	-17.52	-14.17
Geometric Averages	3.36	-17.5 2	-14.17
•			-
Appreciation		-17.5	2 Percent
Corresponding Average Rate of Return (ROR)		-17.5	2 Percent
Appreciation with Income Reinvested		-14.4	9 Percent
Corresponding Average ROR		-14.4	9 Percent

70

STATISTICAL SUMMARY SHEET

Institutional Code Name - Dow Jones

Col. 1 Fiscal	Col. 2 Base	Col. 3 Unit	Col. 4 Apprecia-	Col. 5 Income	Col. 6 Yield		Col. 8
Year 1057	Index	Value 70	<u>tion</u>	Per Unit	Percent	Percent	Percent
1957	100	503.29	r				4 -0
1958 1959	88.77	446.76	-56.53	21.4	4.25	-11.23	- 6.98
	127.88	643.6	196.84	19.9	4.45	44.06	48.51
1960	127.29	640.62	- 2.98	21.21	3.3	- 0.46	2.83
1961	135.9	683.96	43.34	21.46	3.35	6.77	10.12
1962	111.52	561.28	-122.68	23.04	3.37	-17.94	-14.57
1963	140.45	706.88	145.6	23.89	4.26	25.94	30.2
1964	165.21	831.5	124.62	27.73	3.92	17.63	21.55
1965	172.47	868.03	36.53	29.74	3.58	4.39	7.97
1966	172.88	870.1	2.07	29.82	3.44	0.24	3.67
1967	170.93	860.26	- 9.84	32.1	3.69	- 1.13	2.56
1968	178.39	897.8	37.54	30.3	3.52	4.36	7.89
1969	173.5	873.19	-24.61	33.77	3.76	- 2.74	1.02
1970	135.81	683.53	-189.66	31.93	3.66	-21.72	-18.06
1971	177.06	891.14	207.61	31.55	4.62	30.37	34.99
1972	184.59	929.03	37.89	30.88	3.47	4.25	7.72
	177.18	891.71	-37.32	33.1	3.56	- 4.02	- 0.45
1974	159.43	802.41	-89.3	36.82	4.13	-10.01.	- 5.89
		,					
			Ending in 1	L974	3.74	0.4	4.14
Geometri	c Averages	Į.			3.74	0.36	3.4
A							_
Apprecia		·		. on)			Percent
			of Return (F	(OR)			Percent
	tion with		invested				Percent
Correspo	nding Aver	age RUR		3		3,37	Percent
Amithmat	do Arromaco			7.6	2 00	0.00	2.66
	_		Ending in 19	974	3.89	-0.23	3.66
Geometri	c Averages	i			3.89	-1.68	2.22
Apprecia	tion					0 11	D
	nding Aver	aca DOD					Percent
	nding Aver						Percent
			invested				Percent
correspo	nding Aver	age RUR				2.15	Percent
Arithmet	ic Average	e 3 Vre 1	Ending in 19	174	3.72	-3.26	0.46
	c Averages		Bliding III 13	,,,	3.72	-3.44	0.40
Geometii	c Averages				3.72	-3.44	0.3
Apprecia	tion					_ 0 06	Percent
	nding Aver	age ROR				•	Percent
	tion with		invested				Percent
	nding Aver		THACACCA				Percent
COLLEGIO	marne user	age NON				0.23	rercent



APPENDIX IV

Page 2

Arithmetic Averages 1 Yr. Ending in 1974 Geometric Averages	4.13 4.13	10.01	-5.89 -5.89
Appreciation	1	-10.01	Percent
Corresponding Average ROR	7	-10.01	Percent
Appreciation with Income Reinvested	<i> </i>	- 6.1	Percent
Corresponding Average ROR	/	- 6.1	Percent

